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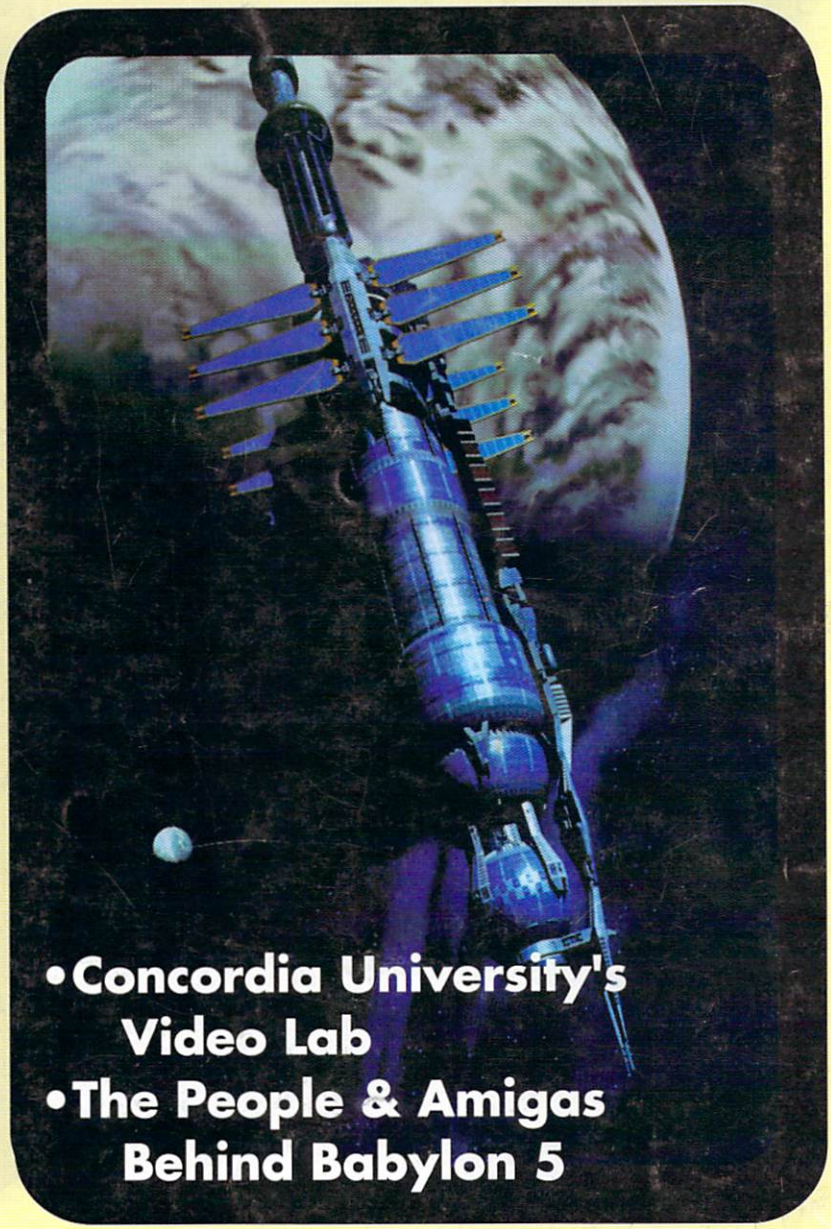
Amazing COMPUTING™ For The Commodore AMIGA®

Your Original AMIGA® Monthly Resource

Volume 8 No. 3 March 1993
US $3.95 Canada $4.95

BABYLON 5

Hollywood Techniques On the Amiga



In This Issue:

- Alladin Tutorial
- DPaint IV Titles
- Morphing with MorphPlus
- Creating AmigaVision Programs
- 3-D Heads

Reviews:

- Playmation
- CineMorph
- Art Expression
- Bill's Tomato Game

- Concordia University's Video Lab
- The People & Amigas Behind Babylon 5

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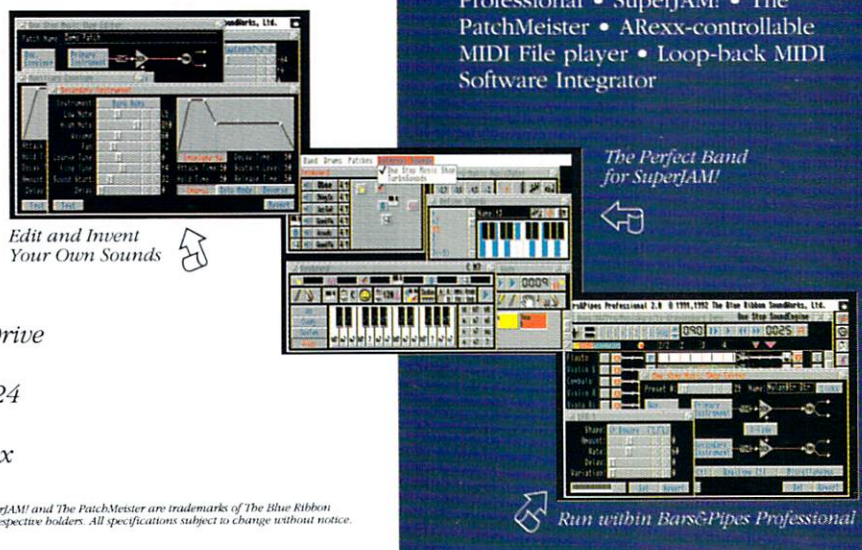
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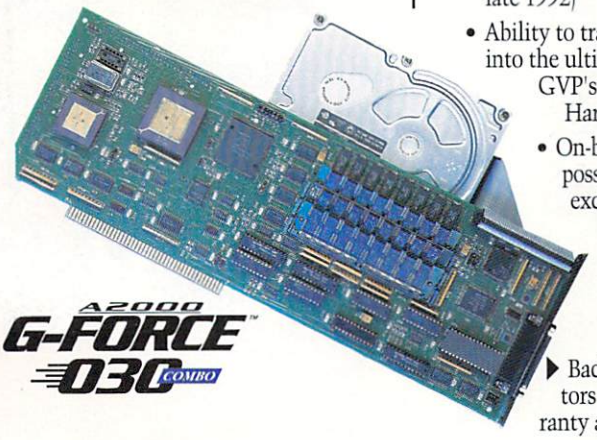
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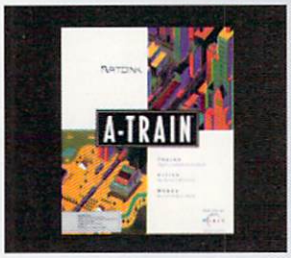
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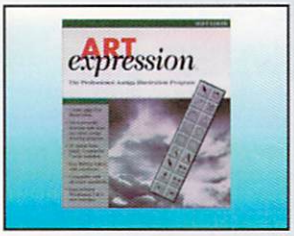
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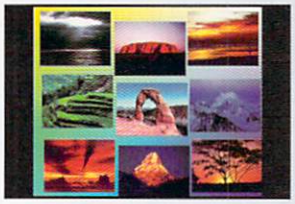
The Amiga changes the way TV shows are made. p.73



New Products p.8



New Products p.8



The Video Slot p.57



Bill's Tomato Game p.84

Columns

8 New Products & Other Neat Stuff
by Elizabeth Harris
Find yourself spellbound by *Elf* and captured by *Hook*, among some of this month's new products.

27 Bug Bytes
by John Steiner
A way to reboot with *Hurricane Accelerator*; a workaround for the *AT Bridgeboard*; and some troubleshooting tips for owners of the *Bernoulli* cartridge.

53 ARexx
by Merrill Callaway
Using ARexx and Postscript to make custom business forms.

57 The Video Slot
by Frank McMahon
Some CD-ROM titles that may not work; taking a course as a way to local cable TV production.

69 Roomers
by The Bandito
Read all about the Gold Disk story! Is Adobe part of the Amiga's future? The Bandito focuses on these topics and more.

77 CLI Directory
by Keith Cameron
Make your Amiga a more efficient machine by using Shell Graphics.

81 Diversions
Featured this month: *Bill's Tomato Game* and *International Sports Challenge.*

Departments

Editorial 6

List of Advertisers 80

Feedback.....90

Public Domain Software....92

And Furthermore 96

SHOW REPORT!





Catch the magic and excitement of CES Winter '93 in Las Vagas, p.85.

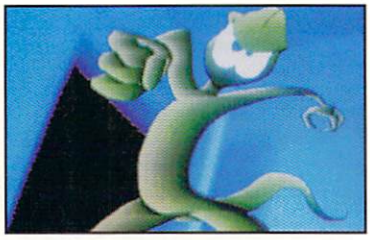
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CONTENTS



Volume 8
Number 3
March 1993

Cover photo courtesy of Foundation Imaging.



MITE AVISTA p.24



AmigaVision p.36



Building Your Business p.40



Creative Titles p.44



Weird Morphs p.66

In This Issue

24 MITE AVISTA
by Terence Byrnes
A look at the Amiga multimedia lab at Concordia University in Montreal.

30 Forging a Head
by Henrik Martensson
This *Imagine* tutorial will help you keep a good head on your 3-D shoulders.

36 AmigaVision Projects
by William Murphy
Use the power of *AmigaVision* to develop educational applications.

40 Building Your Business Image
by Dan Weiss
Use your desktop publishing package to create attractive business forms and attention-getting correspondence.

44 Crayon Titles
by Patrik Beck
How to achieve interesting title effects using *DeluxePaint*.

66 Morph It
by Merrill Callaway
This tutorial will give you the basics on *MorphPlus* and help you create better morphs.

73 Toasty EFX for Babylon 5
by Les Paul Robley
Using the *Video Toaster* almost exclusively to create outer-space effects for the up-coming *Babylon 5* sci-fi television pilot.

85 CES Winter '93 in Las Vegas
Read about Sharp's innovative LCD full-color display camcorder, the new 3DO platform, recent Psygnosis software, and much more.

Reviews

16 Art Expression
by Shamms Mortier
Will this package from Soft Logik, Inc. give the competition a run for the money and push the state of the art? Take a look.

17 DeluxePaint IV Videos
by Greg Epley
This video set of tutorials by Saddleback Graphics is designed for both beginners and experienced users of *DeluxePaint IV.*

19 CineMorph
by Shamms Mortier
Software that addresses three types of morphing: warping a single picture; morphing one image into another; and morphing animated sequences.

21 AMOS Professional
by Jack Nowocki
More than just an upgrade, this version adds 200 new commands to the original–for a total of over 700.

23 Amiga Action Replay MK III
by Henning Vahlenkamp
A ROM cartridge from Great Britain, AR3 freezes your current program as you perform many housekeeping chores.



Amiga Action Replay.

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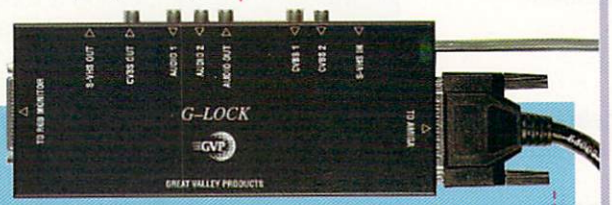
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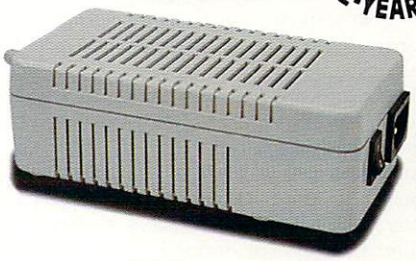
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EDITORIAL CONTENT

In Search Of The Killer App

Among the many items in this issue is the report on the latest new technology from the Winter '93 Consumer Electronics Show. Among the new car stereos, car alarms, personal organizers, television sets, and Nintendo games, there were a few items in video and computers worthy of a mention. Two such items were the 3DO compact disk platform introduced by Panasonic, Electronic Arts, and more as well as the laser disk interactive system LaserActive™ introduced by Pioneer.

Pioneer's LaserActive system is a laser disk and compact disk player with optional modules for SEGA, TURBO GRAPHICS, and Karaoke disks. The multiple-disciplined product allows users to connect their Pioneer player to 10 different types of software products, provided that they have purchased the appropriate plug-in modules. The interactive laser disk system itself allows the user a variety of educational and entertainment possibilities with either the large laserdisk play back or the CD-ROM software in just one drive.

3DO is a slightly different animal. Instead of attempting to combine the different formats available into one machine, 3DO designers have attempted to create a platform, with new technology and a vast amount of corporate support, designed to take the emerging CD-ROM market by force. With names such as Matsushita (owners of Panasonic, National, Quasar, and Technics), AT&T, Time Warner, MCA (owners of Universal Studios), Electronic Arts, and New Technology Group (David Morse, R.J.Mical, and David Needle who were major contributors to the original Commodore Amiga and Atari Lynx), 3DO has captured the attention of the media, investors and software developers. However, is it enough?

Technology Drives the Market, But Which technology?

No software can be written until the hardware platform is available. Yet, in the same manner, no hardware can be sold until there is software to run it. With the introduction of LaserActive, 3DO, VIS (from Tandy), and a mysterious new platform discussed but not seen in the back aisles of CES's entertainment area, the number of CD-ROM-based interactive media platforms has reached 11 different types of platforms. Each has its own claim for being the best. CD-I notes the resources of its parent Phillips Electronics. CDTV has a strong development platform based on a proven technology, the Amiga, and almost eight years of development tools. 3DO provides a large body of development materials and a diversified group of investors and backers. Pioneer has made their LaserActive a chameleon to play an assortment of formats and lets the users choose their favorites.

Each member of this growing fraternity can point proudly at their product and state why they will become the standard of the industry. But, for all the new announcements and special introductions, the products have yet to win the hearts and the support of the consumers. Why?

The consumers have seen technology change quickly. They are waiting to see who will dominate the industry. They are waiting to see who will provide the standard in CD-ROM interactive software. The only problem is that the future is only partially in the hands of the hardware developers. The real future is in the hands of the software developers.

What Is a Killer App?

Not too many people needed an Apple or an IBM until the *Visicalc* spreadsheet. The Macintosh inspired the desktop publishing industry only after the introduction of *PageMaker*. Video and graphics have made the Amiga a number-one hit with artists. It is the same with all technology.

As roads improved, more and better cars were created and sold and better roads were created. As people found a need for more frozen food space, larger freezers were created both in the refrigerator and in standalone units. Television improved its color as stations improved their transmissions and producers improved the film quality. Technology drives technology, but people buy solutions.

The problem with the current array of CD-ROM platforms is that no one has offered a solution which is needed or coveted by the public. Certainly new software with movie-like quality is attention getting, but will it inspire people to purchase a machine ranging in price from $200 to $1000? Even if CDs can hold vast amounts of information and search and find documents at lightning speed, have we convinced the consumer that they need this ability? Or are we consumers just as happy searching through a book for the information we want.

We could face the problem in the same manner that the record industry did. When music CDs became available, ordinary records became scarce. I am sure there is a loud cry of denial from the record industry on this. I know industry spokespeople have been quoted as saying that they provided CDs because that was where the demand was. However, why was there such a demand to pay more for a product, that cost less to produce, than the records that were playable in almost every home. In the beginning there were very few CD players in use, but record departments carried large quantities of CDs. Most people I know who purchased a CD player did so because they could no longer find the standard long-playing records. Was this a case of the technology driving the market?

To sell something, some one must either want it or need it (the latter being the most persuasive). When I speak with the developers of these different platforms, they all agree that one thing is needed to make them different—The Killer App.

The Killer App is an application available only one place (or is mimicked, but only one supplier provides the best) and provides the reason to purchase a product. It must use the technology on which it is developed so thoroughly no one could imagine using it elsewhere. It should provide a solution to a problem everyone has seen, but no one has recognized or discovered an acceptable cure.

The Killer App should provide a unique solution so clean and neat that everyone who sees it should ask, "Why didn't I think of that?"

The Killer App should be priced competitively in the market for which it was designed. If current users are paying $1000 for an inferior solution, you could charge $500 or so. However, if the current market is such that a $100 clears the problem, charge $50. Anything less than that may be a killer App, but would not be one on a computerized platform.

It is the search for the Killer App that drives these new technological masterpieces. Each hardware vendor is attempting to provide the platform with just the right options, features, and support to ignite the imagination of a software developer. This imaginative software genius will then be inspired to develop the Killer App.

From such a Killer App, empires have been born. Accounting and computers, personal electronics and the transistor, CNN and cable television, are only a few of the applications that have driven the markets.

Will these brave explorers find the Holy Grail of CD-ROM computing? Will they say the right thing, demonstrate the correct feature, implement the perfect tool that will inspire someone to seize the technology and make it perform the tasks we need? Of course. With so many companies shooting at the market, someone must hit something.

Oh, uh, please excuse me. While I was writing this I got this idea... Maybe this will work...

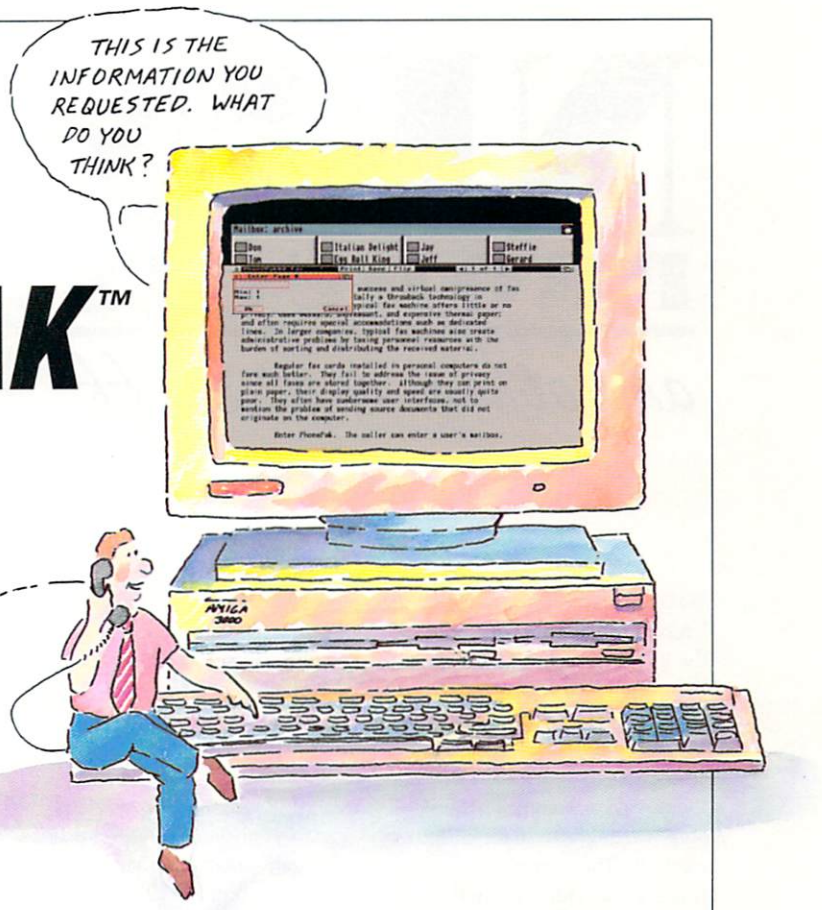
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PhonePak Saves Time and Money

With PhonePak, you get a powerful, yet affordable, fax and voice messaging system that:

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- Lets the caller decide whether to leave a message or speak with the called party.

And, you get something no other fax machine or computerized fax product can offer — privacy for every fax received.

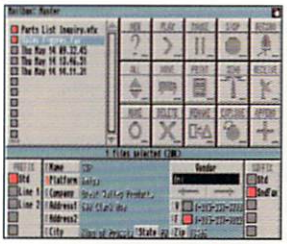
PhonePak Helps You Work Smarter

As you can see, anything fax machines, answering machines, and voicemail systems can do, PhonePak can do.

Plus, PhonePak is the only technology that gives you fax and voice information combined.

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PHONEPAK™ VFX



Main PhonePak Control Panel

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KING OF PRUSSIA, PA 19406
U.S.A.

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FAX 215•337•9922

PhonePak requires 2MB RAM and a hard drive, and is FCC certified for use in the United States.

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Circle 112 on Reader Service card.

NEW PRODUCTS

and other neat stuff

A3000/Toaster

L & N Productions is now shipping the long awaited A3000/Toaster! A do-it-yourself video and 15-page booklet ($35) on how to install the Video Toaster™ in the Amiga 3000. The instructional material leads the novice or technician step-by-step through two installation methods. The informative booklet follows the video from start to finish and includes other helpful information. *L & N Productions, P.O. Box 391, Brownsville, CA 95919, (800) 676-4510. Inquiry #205*

The Addams Family

Set out on kookey treasure hunt through the demonic twists and turns of the Addams Family mansion and its grounds. Beginning at the Hall of Stairs, players explore five levels of play, with traps, secret doors and ghoulish creatures in an offbeat blend of surreal threats.

The conniving Abigail Craven is after the Addams' hidden fortune. She concocts a zany inside job, first recruiting Uncle Fester, then using him, along with her minions, to capture other members of the family. It's up to Gomez to search for Pugsley, Wednesday, Morticia, and Granny and restore Uncle Fester's memory. After dodging sinister creatures and outwitting devious traps, Gomez winds up in the underground vaults of the mansion, ready for a confrontation with the evil judge. *Ocean of America, Inc., 1855 O'Toole Ave., Suite D-102, San Jose, CA 95131, (408) 954-0201. Inquiry #211*

Alien Breed Special Edition '93

Alien Breed Special Edition '93 is the budget-priced incarnation of its namesake. Features include 12 new missions, more challenging gameplay, an ability to carry unlimited keys, more balanced weaponry and damage ratio, much better game maps and storyline, and much more. *Team 17 Software Ltd., Prospect House, Borough Road, Wakefield, West Yorks, England. WF 1 3AZ. Tel. (011) 0924 291867. Inquiry #212*

AmigaDOS Release 2.1

Among the new features of AmigaDOS Release 2.1 are CrossDOS, which provides for the reading and writing of MS-DOS® formatted files; improvements to the versatile Preference Editors; enhancements to the printer drivers, including the addition of a Postscript® driver; and an improved multi-level installation program, allowing quicker and easier configuration or updating of Amiga® system software.

Current Amiga owners using V2.0x of the operating system may purchase the AmigaDOS Release 2.1 Upgrade Kit for a MSRP of $49. The kit includes six software disks and a set of manuals. System 1.3 or earlier versions will require the AmigaDOS Releas 2.1 ROM and Software Upgrade Kit containing ROMs, six disks, and the manual set for an MSRP of $99. This upgrade must be installed by an Authorized Commodore Service Center to maintain the Commodore Limited Warranty. *Commodore Business Machines, Inc., 1200 Wilson Drive, West Chester, PA 19380, (215) 431-9100. Inquiry #206*

AmigaVision Professsional

AmigaVision Professional ($399) builds and expands on the visiual programming environment used in earlier versions of AmigaVision. One of the many new product features is the ability to display Advanced Graphics Architecture (AGA) based screens, which is key to users of the new Amiga 4000 and Amiga 1200 AGA computers. Among other new features are full support for the CDTV player, including playback of CD-ROM based CD-XL motion video files; speed and memory improvements; and enhancements to the authoring environment. In addition, a freely redistributable Runtime Module has been included, enabling flows created in AmigaVision to be played back without loading AmigaVision. *Commodore Business Machines, Inc., 1200 Wilson Drive, PA 19380, (215) 431-9100. Inquiry #207*

AnimFonts 5

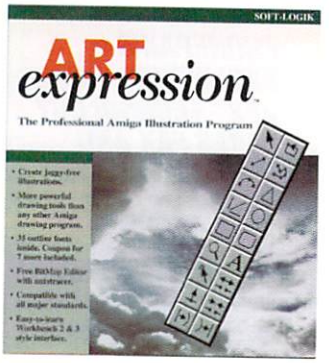
AnimFonts 5 ($59.95) is a new hires ColorFont called KaraGOTHICchisel, which is a shiny, chiseled, lightfaced, contemporary gothic font with caps, lower case, numerals, and special characters. The AnimFont can be used with DPaint III or IV, DVideo III, and any other program capable of using the AnimBrush format. *Kara Computer Graphics, 2554 Lincoln Boulevard, Suite 1010, Marian Del Rey, CA 90291, (310) 578-9177. Inquiry #213*

ARexxDB Version 2.0

ARexxDB Version 2.0 is now available. Existing owners of ARexxDB can get an upgrade for $20 plus $5 shipping and handling. This upgrade includes two disks and a new expanded manual. *JMH Software of Minnesota Inc., 7200 Hemlock Lane, Maple Grove, MN 55369, (612)424-5464. Inquiry #208*

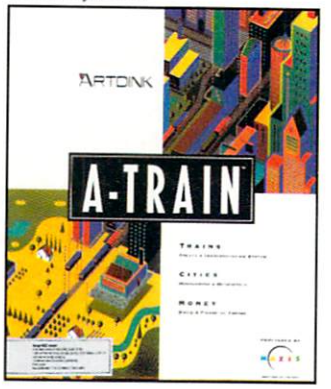
Art Expresion 1.0

Art Expression is a professional illustration program designed for professional artists and hobbyists. Art Expression allows you to manipulate text and graphics; you can warp text virtually any shape and create complex shaded drawings. Art Expression also has powerful color capabilities and can be used with virtually any printer. *Soft-Logik Publishing Corp., 11131 S Towne Sq, Ste F, St. Louis, MO 63123, (314) 894-8608. Inquiry #209*



A-Train

A-Train ($69.95) challenges you to build the metropolis of your dreams, with a railroad as the transportation hub, and prove that a prosperous city can develop around a clean and efficient public transit system.



Your first challenge is to design and manage an efficient and profitable transportation system for both passengers and freight. Lay your tracks, choose your trains, set your schedules, and let'em role. The next challenge is to develop a city around your transportation system. Buy and develop land, and expand your business interests into hotels, factories, resorts, and more. As your holdings grow, other buildings and businesses will grow around you. You control the city

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Carsmear by Mike Vunck

★ Automatically convert image files to/from over 20 different file formats.

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★ Spiral Effects
★ Water/Glass Distortion

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growth from the private sector. The final challenge is to build a financial empire. Borrow from the bank to expand your real estate and business holdings. Invest in the stock market and make a killing—or go broke. *Maxis, 2 Theatre Square, Ste. 230, Orinda, CA 94563-3346, (510) 254-9700. Inquiry #210*

Bill's Tomato Game

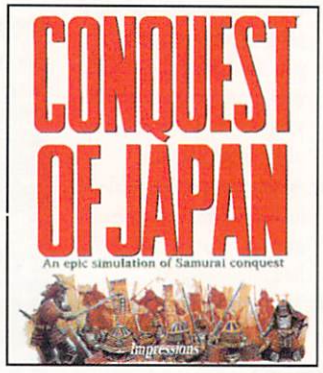
What a pair of tomatoes, Terry and Tracy are two of the hottest tomatoes in the patch. Freshly picked and off to be canned, they escape to pursue their dream of marriage and little cherry tomatoes. But as luck would have it an evil squirrel has foiled their plan, capturing Tracy and stashing her high atop his vine-top home. Can love conquer all? It's up to you and Terry to save the fair Tracy, solve the challenging puzzles, and brave the many dangers that lie ahead. *Psygnosis, 29 St. Mary's Court, Brookline, MA 02146, (617) 731-3553. Inquiry #214*



Conquest of Japan

At last, the Daimyo stood, and faced his amassed warriors. The time had come. He would reconquer the lands stolen all those years ago. Vengeance would be his!

In Conquest of Japan, you are a Japanese Daimyo—a Lord. You control five cities on Japan's main island, Honshu. Each provides money for you to buy armies, with which you must conquer your enemy—or be conquered yourself. Conquest of Japan is a graphically exquisite and unique blend of strategy and tactics. Move your armies to try to take the enemy's cities, while defending your own; and do battle in real time, using wonderfully animated warriors in authentic Samurai formations. *Impressions Software, 7 Melrose Drive, Farmington, CT 06032, (203) 676-9002. Inquiry #215*



DeluxePaint IV AGA

DeluxePaint now offers more colors and better screen resolution to Amiga owners using Commodore's new AGA chip set. For owners of the A4000 or A1200, DeluxePaint IV AGA ($199) now offers 256-color support and access to over 262,000 colors (HAM8) at any resolution, including hi-res. The program also reads and converts 24-bit IFF files, supports all Amiga screen resolutions, and includes all the features of its predecessor DeluxePaint 4.1.

Electronic Arts is offering a $30 upgrade to DeluxePaint IV owners. Details for ordering the upgrade can be obtained by calling Electronic Arts Monday through Friday between 8 a.m. and 5 p.m. Pacific Time. *Electronic Arts, 1450 Fashion Island Blvd., San Mateo, CA 94404, (800) 245-4525. Inquiry #216*

Derringer

The Derringer is a new 25MHz 68030-based accelerator that gives A3000-level performance to any Amiga for $249.95. The Derringer supports the addition of 1, 2, 4, or 8 more megabytes DRAM, together with a 50MHz 68881 or 68882 math coprocessor. For added speed, the Derringer comes with proprietary software designed into the board which gives users the option of relocating the Amiga operating system (Kickstart 1.3 or 2.04) into 32-bit dynamic RAM, leaving the MMU free for other programs. *Computer System Associates, Inc., 7564 Trade Street, San Diego, CA 92121, (619) 566-3911. Inquiry #217*

DynaCADD 2D

Ditek launches DynaCADD 2D, a high-level 2D design package for the Amiga to retail for only $269. This version is the 2D portion of Ditek's powerful 2D/3D Computer Aided Design and Drafting solution. DynaCADD 2D will include both a 68000 and a 680X0 version. Features such as on-line help, context-sensitive documentation and a well organized and intuitive graphical user interface make DynaCADD extremely easy to learn and use. *Ditek International, 2800 John St., Unit 15, Markham, Ontario, Canada L3R 0E2, (416) 479-1990. Inquiry #218*

Elf

Playing Cornelius, gamers travel through enchanted woods, mines, forest thickets, mountain peaks, castles, and jungle swamps in search of Princess Elisa, captive of the evil Necrilous. More than 60 locations make exploring this land the ultimate adventure. The action is continuous, with eight multi-level quests, additional pursuits, and hundreds of mini-challenges. With so many options to explore, no two games are ever the same. Elf is available immediately for $39.95. *Ocean of America, Inc., 1855 O'Toole Ave., Suite D-102, San Jose, CA 95131, (408) 954-0201. Inquiry #219*

Epic

In Epic ($49.95), the gamer's mission is no less than the salvation of all the races of the Federation. The only hope for survival is to convoy an entire civilization of people to new worlds, for theirs will soon be nothing but cinders. Gamers control the head of the convoy, in the cockpit of one of three supremely advanced Epical starfighters of awesome power and destructive capabilities. *Ocean of America, Inc., 1855 O'Toole Ave., Suite D-102, San Jose, CA 95131, (408) 954-0201. Inquiry #220*

Espana: The Games '92

Gamers assume the role of team manager, then takes on every detail of their training—right down to working with the team physician to set a regimen for each athlete's workouts. A statistics section provides complete stats, right from the first Olympic Games, allowing gamers to incorporatemedal-setting records in their competition strategy. The game's reference section gives special information on the Barcelona games, information about specific events and the athlets who competed, as well as details on the evolution of today's Olympic Games. Gamers play Espana: The Games of '92 ($39.95) in any of four languages, and may choose a team's country to represent. *Ocean of America, Inc., 1855 O'Toole Ave., Suite D-102, San Jose, CA 95131, (408) 954-0201. Inquiry #221*

FASTLANE Z3™

The FASTLANE Z3™ SCSI-II DMA Controller sets new standards for high performance SCSI controllers not only for Amiga based systems. With its uncompromised 32-bit Zorro-III interface it is the perfect solution for all professional Amiga 4000 users who cannot live with the Integrated IDE controllers as well as Amiga 3000 owners who want to get the highest possible performance from their hard drives. *Phase 5 Digital Products, Homburger Landstrasse 412, 6000 Frankfurt 50, Germany, (49) 69 5481844. Inquiry #222*

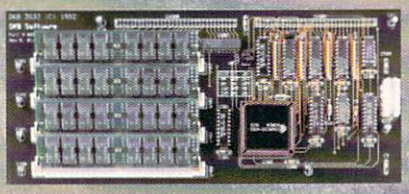
Headlines 4

Headlines 4 ($79.95) consists of four fonts from the popular Toaster Font 3 & 4 series converted to the

Complete your Amiga with the latest hardware from DKB

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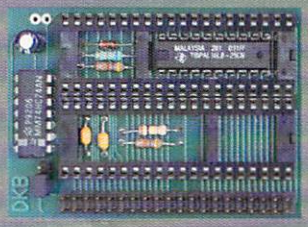
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- Now you can go beyond 4 Megabytes of 32 Bit memory.
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- Does not use autoconfig space, uses 32 Bit address space so that you can still use your AT Bridgeboard with more than 6 Megs of Fast RAM.
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- Compatible with the Vector 030-25 accelerator from IVS.
- Compatible with the Video Toaster system, Amiga A2500, A2000HDA/100.
- Compatible with the CSA Rocket Launcher™ 50MHz upgrade for the A2630 accelerator card.

MultiStart II™

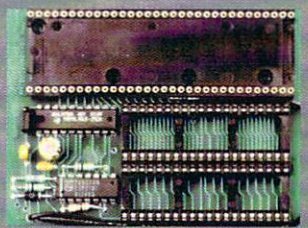
For the A500, A600 & A2000



Allows A500 A600 and A2000 owners to install Kickstart V2.0 and V1.3 ROMs and switch between them with the keyboard. No software required for operation. Lets you stay compatible with your software. No external wires or switches required. This MultiStart is compatible with the MegAChip 2000/500, VXL030., and CSA MMR accelerators for the A500 and also most other products that install inside the A500. This is the ROM switcher that Commodore Amiga Technical Support sells to developers.

KwikStart II™

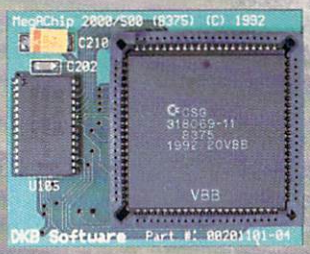
Use Kicksart 2.0 in your Amiga A1000



Allows A1000 owners to install V1.3 and V2.0 Kickstart™ ROMs and switch between them. Upgrade to the latest operating system and still be compatible with software that requires Kickstart V1.3. Use the latest V2.0 operating system without using up your system memory. Fully compatible with Kickstart V2.0 and Workbench V2.0. Uses standard Commodore ROMs for easy upgrades. Allows you to boot faster because you only need to load Workbench. Works with Kickstart V2.0, V1.3, and V1.2. Compatible with the Insider memory expansion boards. Also compatible with most processor accelerators. Keyboard switchable between two ROMs or between one ROM and disk based Kickstart. No external wires or switches required

MegAChip 2000/500™

2 Megabytes of Chip RAM for the Amiga A2000, A500, CDTV & Video Toaster



"The MegAChip 2000/500 should be standard equipment on every Video Toaster System."

Jim Plant - Publisher/Editor Video Toaster User

"The MegAChip 2000/500 is a must own for anyone that wants to use Toaster Paint™ or Multitask with the Video Toaster."

Lee Stranahan - Writer of the Video Toaster 2.0 manual Tutorials also featured in the Desktop Images Video Toaster Tutorial tapes.

"I would advise Toaster users who make use of Toaster Paint or LightWave™ to add DKB's MegAChip 2000/500 to your system as soon as possible."

Tim Doherty - Video Toaster User

The MegAChip 2000/500 allows you to upgrade your Video Toaster, Amiga A2000, A500, and CDTV™ to 2 Megabytes of Graphics Memory.

The MegAChip 2000/500 is a needed addition to your system if you are working with Desktop Video, 3D Rendering & Animation, 24-Bit Paint, Multimedia or Desktop Publishing.

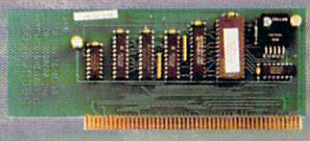
Scala MultiMedia 200 requires 2MB of Chip RAM which means an A500 or A2000 needs a MegAChip 2000/500 installed to use this software

Fully compatible with the Video Toaster™, OpalVision™, VLab™, IV-24™, DCTV™, Ham-E™, and most genlocks and framebuffers.

Fully compatible with most 68030 and 68040 accelerator cards.

SecureKey™

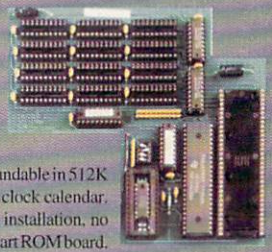
Access Control System For The A2000 & A3000



The SecureKey is a hardware security device that installs in any A2000 or A3000 or Video Toaster system. The SecureKey allows you to have one access code for your Amiga. The SecureKey will not allow access to your Amiga without the right security code, period. You can't boot off of a floppy or bypass it in any manner. If you need to keep your system safe from unauthorized use - Want to make sure that no one can delete files from your harddrive or steal your work then you need the SecureKey. This means that if your system has files such as animations, documents, presentations, C code, or any type of confidential information, you can be assured that the files on your harddrive are safe. Keep your Amiga safe from those that may otherwise unknowingly destroy your information. Requires Kickstart V1.3 or above. The SecureKey is fully compatible with Kickstart V2.0.

Insider II™

1.5 Meg in the A1000



From the maker of the first internal RAM board for the Amiga 1000: the original Insider™ by DKB Software. Allows A1000 owners to add up to 1.5 Megs of Fast RAM internally. User expandable in 512K increments using 256K x 4 DRAMs. Includes battery-backed clock calendar. Comes with software for the clock and testing RAM. Simple installation, no soldering required. The Insider II is compatible with the KwikStart ROM board. Also compatible with most processor accelerators.

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Contact your local dealer or call for information.

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All Products come with a Full One-Year Warranty. Dealer inquiries welcome.

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eight-color hi-res ColorFont standard for all ColorFont compatible programs on the Amiga. The font styles are KaraGOTHICserif, KaraROMANextrude, KaraChiselSCRIPTroman, and KaraBRUSHED. *Kara Computer Graphics, 2554 Lincoln Boulevard, Suite 1010, Marian Del Rey, CA 90291, (310) 578-9177. Inquiry #223*

HomeoCD

The Homeopathic Medical Association of Canada announces the introduction of HomeoCD ($60), an interactive compact disc on homeopathy. The disc contains over 500 recommendations in a simple and precise language. HomeoCD is offered in French and English. *HMAC, P.O. Box 262, Saint-Bruno, Qc, Canada, J3V 4P9, (416) 513-8207. Inquiry #224*



Hook

Hook's ($49.95) six levels of play, featuring exceptional animation and character movement, are packed with unequalled challenges. Neverland is more dangerous than ever as gamers, playing Peter Pan, seek his kidnapped children and their captor, Captain Hook. Innovative vertical scrolling, with 3-D and 2-D views, add new dimensions to the gameplay. Brilliant graphics and a movie-quality soundtrack, together with point-and-click interface make Hook a memorable gaming experience. *Ocean of America, Inc., 1855 O'Toole Ave., Suite D-102, San Jose, CA 95131, (408) 954-0201. Inquiry #225*

Indiana Jones and the Fate of Atlantis

Fate of Atlantis ($59.95) is an exciting worldwide race to find the potent magic of Atlantis—before the Third Reich unleashes the Lost City's power for evil. The game is designed with three playing paths. Based on choices players make early in the game, they are led down either a "wits," "fists," or "team" path. Further enhancing replayability are complex puzzles with alternative solutions. Available for Amiga models 500, 1000, 2000, 2500, and 3000. *Lucas Arts Entertainment Company, P.O. Box 10307, San Rafael, CA 94912, (415) 721-3300. Inquiry #226*

MBX 1200

The MicroBotics MBX 1200 is offered to Amiga 1200 owners as a cost-effective, high-quality upgrade solution to provide a Motorola 68881/68882 Floating Point Unit and support the installation of up to 8MB of 32-bit wide Amiga FastRAM. The MBX 1200 board installs internally on the Amiga 1200's standard 150-pin bus expansion connector. *MicroBotics, Inc., 1251 American Parkway, Richardson, TX 75081, (214) 437-5330. Inquiry #227*

MathVISION 2.4

MathVISION 2.4 ($233; upgrade for version 2.0 $49) features 24-bit support, support for a variety of 24-bit hardware through libraries, new functions, easier interfaces such as tabbing between the lines, and an ability to launch hooks and ARexx from within MathVISION. *Seven Seas Software, Inc., P.O. Box 1451, Port Townsend, WA 98368, (206) 385-1956. Inquiry #228*

MemoPlug

MemoPlug (first time orders $500) is designed to protect the Amiga software products from being copied. The plug connects to the Amiga parallel port leading to the printer. The software that is included (object code) will totally avoid any operation of the program when the plug is disconnected. The MemoPlug includes serial numbering, Demo mode, and a secret code for each software house that uses it. *HarmonySoft, 69 Jabotinsky St., Givatayim, Israel 53319, (011) 972-331-5967. Inquiry #229*

Push-Over

G.I Ant, your on-screen persona, blazes a trail through the treasure caves of Captain Rat. The crafty insect must knock over every domino on the screen—arranged on platforms of various heights—in the right order so that the trigger domino is the last to go. That trigger domino will open the door to the next level.

Using a variety of dominoes, each with a different movement, makes Push-Over ($49.95) a serious challenge for any gamer. *Ocean of America, Inc., 1855 O'Toole Ave., Suite D-102, San Jose, CA 95131, (408) 954-0201. Inquiry #230*

RoboCop 3D

RoboCop 3D lets gamers choose between an arcade or adventure mode. In the arcade version gamers move through five intense action sequences; the adventure provides an intriguing plot to unravel, where solving clues and using game strategy are required to complete each mission. Either way, you're in the driver's seat with RoboCop 3D's first-person perspective.

Eight spellbinding stages take gamers on a 3-D adventure which captures the look, dialogue, and attitude of the original movie adding a special battle plan option. The gamer controls new multi-weapon arm attachment, bristling with a large-bore cannon, rapid-fire machine gun, and smart bombs. *Ocean of America, Inc., 1855 O'Toole Ave., Suite D-102, San Jose, CA 95131, (408) 954-0201. Inquiry #231*

ScapeMaker 3.0

A rewritten, greatly improved ScapeMaker with its own screen, pushbutton 2.0-look user interface, 2.0 file requester, and 2 landscape (DEM) buffers displayed in 16 shades of gray. Registered owners of ScapeMaker 2.0 can upgrade by returning the original disk with $25, registered owners of ScapeMaker 1.0 return disk with $35. Works with AmigaDOS 1.2, 1.3, 2.x, and 3.0. *MegageM, 1903 Adria Street, Santa Maria, CA 93454-1011. Inquiry #232*

VisionModeller 3D Version 1.1

ShaderSoft announced the release of Version 1.1 of VisionModeller 3D. The new release requires AmigaDOS 2.04 or higher running on at least an Amiga 3000 or equivalent platform. VisionModeller 3D V1.1 also requires the use of XSpecs glasses for working in stereo 3D but the program is also fully capable of working in single perspective mode. *ShaderSoft, 3631 Colby SW, Wyoming, MI 49509, (616) 531-6083. Inquiry #233*

VisionModeller 3D Version 1.2

New features include basic scanline rendering, multiple Undo last digitized location, fine and coarse 3D cursor control, dynamic object sizing during insertion, output for the freely distributable Persistence of Vision Ray Tracing program, and View Lists for even quicker selection of any number of views added to the list. Free upgrades available to all registered users. *ShaderSoft, 3631 Colby SW, Wyoming, MI 49509, (616) 531-6083. Inquiry #234*

•Books•

AmigaDOS Reference Guide, Fourth Edition

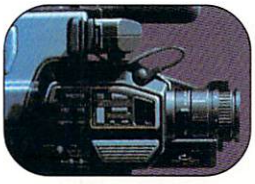
Updated and completely revised, AmigaDOS Reference Guide, Fourth Ed. ($22.95), now covers all versions of AmigaDOS, including the new Release 2 and Release 3. This is the guide all Amiga users need to take full advantage of the power of the Amiga.

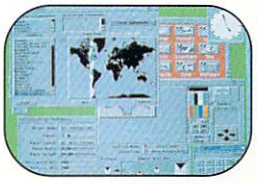
Author Sheldon Leemon takes the reader, step-by-step, through the intricacies of AmigaDOS, from creating a CLI disk to building a personalized command sequence

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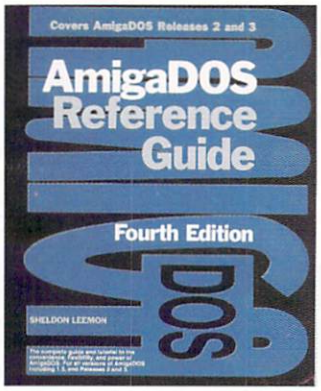


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NEW PRODUCTS
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file. Thoroughly illustrated with practical examples, this book covers every AmigaDOS command including all the new Release 2 and Release 3 commands. *Computer International Ltd., 324 West Wendover Ave., Greensboro, NC 27408, (919) 275-9809. Inquiry #235*

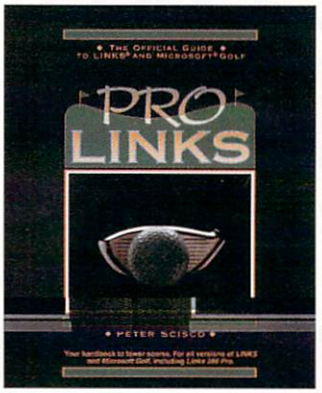


AMOS In Action

This new book gives ideas, tips, and inside information on writing good games with AMOS. Details, write-ups, and opinions on the add-on packages for AMOS are also included. Contacts for shareware libraries and information on how to get your games published are included as well. All this and a free game (with source code) too! A coupon for a free disk is included as part of the book. *Kuma Computers Ltd., 12 Horseshoe Park, Pangbourne, Berks, RG8 7JW, Tel. 0734 844335. Inquiry #236*

Links Pro: The Official Guide to Links and Microsoft Golf

Links Pro ($16.95) is written for all versions of Links and Microsoft Golf and includes in-depth strategies and professional advice players need to cut strokes from their scores. This comprehensive guide provides hole-by-hole, stroke-by-stroke strategies for all eight Links courses. *Computer International Ltd., 324 West Wendover Ave., Greensboro, NC 27408, (919) 275-9809. Inquiry #237*



Mastering Amiga-ARexx

This book is guaranteed to get the Amiga owner into the world of ARexx programming quickly, productively, and enjoyably. In short, people want to know what ARexx is and how it can be used and it is exactly this type of question that this book answers in full, shedding light on all the main issues in its 336 pages. *Bruce Smith Books Limited, Smug Oak Green Business Centre, Lye Lane, Bricket Wood, Herts, AL2 3UG, 011-44-923-894-355. Inquiry #238*

•Other Neat Stuff•

Computersave Uninterruptible Power System

Computer Power Inc., announces their Computersave series of uninterruptible power systems. The Computersave provides pulse width modulated, line interactive, ferroresonant, on-line power for manufacturing and proces controllers, factory automation systems, multiple workstations and PCs, LANs and file servers, telecommunications systems and medical electronics.

Available in capacities from 900VA single-phase to 50kVA three-phase, the Computersave series features up to eight hours of emergency run time. *Computer Power Inc., 124 W. Main St., High Bridge, NJ 08829, (908) 638-8000. Inquiry #239*

DRC Sequential Graphics

DRC Sequential Graphics would like to offer you an incentive for purchasing their product. From now until April 30, 1993, you can recieve their two disk, texture and backdrop compilation, Digital Collage, for the introductory price of $5 (s&h included). That's $2 off the regular price.

Digital Collage is a monthly compilation that serves the professional desk top videographers and 3-D renderers of the Amiga community. *DRC Sequential Graphics, 57 East 400 North #9, Provo, UT 84606-2986, (801) 373-9579. Inquiry #240*

KJV-Bible Search Now Available as Shareware

SOGWAP Software announced that the King James Version Bible Search program is now available as shareware for all Amiga users worldwide. The entire program uses four Amiga disks and is easily installed on Hard Disk. *SOGWAP Software, 115 Bellmont Road, Decatur, IN 46733, (219) 724-3900. Inquiry #241*

Libra Communications

A new desktop publishing and design firm aims to meet the promotional and publishing Amiga-based businesses. Now, businesses that don't have the time, resources or expertise to produce their own Amiga-made publications can still impress their clients with professional-quality brochures, newsletters, or annual reports.

By using the latest in Amiga-based electronic publishing technology, the company will provide a comparitively low-cost yet thoroughly professional-quality alternative for producing promotional materials. In addition, these businesses will no longer have to worry about getting their text files converted to either the MS-DOS or Macintosh format for publishing by non-Amiga publishers. *Libra Communications, Inc., 215 Calabria Ave, Ste. 7, Coral Gables, Fl 33134, (305) 529-1USA. Inquiry #242*

Map Editor for Spoils of War

All shipments of Spoils of War shipped after December 27, 1992 included a free Map Editor. This Map Editor allows new maps/scenarios to be built, including nine new worlds already created! For those customers already owning Spoils of War, if you provide a SASE sturdy enough to hold a 3.5" or 5.25", RAW Entertainment will provide the Map Editor free of charge. *R.A.W. Entertainment, 3027 Marina Bay Dr., Ste. 110, League City, Texas 77573-2772, (713) 538-3399. Inquiry #243*

•AC•

New Products and Other Neat Stuff is Compiled by Elizabeth Harris.

How to get your products listed in New Products and Other Neat Stuff

Send a descriptive press release and two copies of the software or hardware. Please include product name, company name, full address, and telephone number. Our mailing address is PiM Publications, Attn: New Products Editor, P.O. Box 2140, Fall River, MA 02722-2140. For UPS and Federal Express, our address is PiM Publications, Attn: New Products Editor, 1 Currant Place, Currant Rd., Fall River Industrial Park, Fall River, MA 02720-7160.

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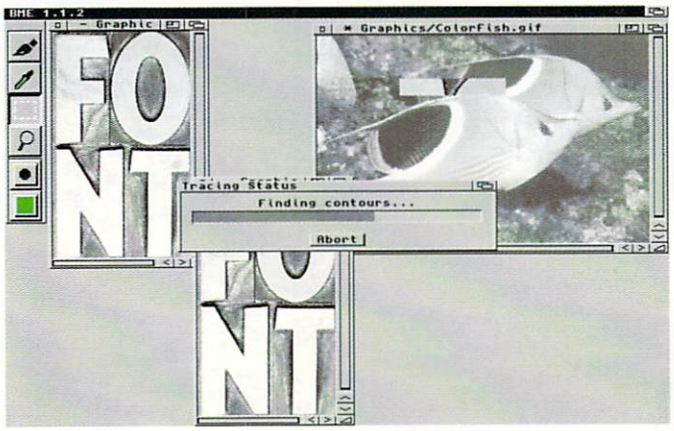
REVIEWS

Art Expression

by R. Shamms Mortier

When there is no competition in the marketplace, the tendency creeps in for a unitary product to become somewhat self-satisfied with its own stature. Research and development, service to the user, and other necessary ways of interacting with the continued development and addressing needs of the consumer are slowed to a crawl at best. Traditionally, this has been the case with Amiga structured drawing software. There has been one main leader in this field, though a small group of minor developers have also entered it. Because of this, the leading software has been slow to answer the calls of the users in upgrading tools and processes to a level commensurate with other non-Amiga software platforms. This action, or lack of it, is somewhat understandable. If the only game in town refuses to change its response patterns, you may be frustrated, but it remains the only game in town. For this reason, Soft Logik, with its proven user interaction in the Amiga desktop publishing world, has been the long awaited challenger in the area of structured drawing software, and the release of their *Art Expression* package has been anticipated for quite a while. Well, here it is. Will it give the competition a run for the money, pushing the state of the art while motivating some real competitive races in the next years? Let's take a look.





Various object drawing tools are available in Art Expression and the is a wealth of support for text and lettering options.

Art Expression is the sister of Soft Logik's *PageStream*, a proven and often upgraded leader in Amiga desktop publishing. PageStream has always had a nice list of drawing tools of its own, but has lagged behind in areas that are really needed by creative DTP folks. Some of these areas have included the ability to wrap text on a curve, create gradiated fills, generate movable EPS files, and in short, to aid in the development of quality structural art. Other structural drawing programs have tried to address PageStream with some success, but up until now there has not been a package that has accomplished it with as much obvious built-in friendly handshaking.

There are really three distinct parts to the Art Expression package. The first is the Art Expression module itself, which is then joined by Soft Logik's BME (BitMap Editor) and a "Convert" module. The convert module, is included so you can translate

Gold Disk's PDraw Clip files into information that Art Expression can digest, display, and edit. BME has two uses: to manipulate BitMap pictures and to covert BitMaps to structured drawings.

Tools familiar and new

The look of the Art Expression interface is as classy as it gets, and all tools and processes are clearly depicted verbally and visually in the manual and supplements. All tools have on-line help, and a tech number is included in the manual if you need it. Pages and/or separate selected art can be saved in the Art Expression format (Art Expression EPS), *Adobe Illustrator* 88 EPS, and IFF DR2D. The manual lists several non-Soft Logik programs that these drawings can be exported to, and explains whether the software will be able to edit the results and also whether Art Expression can import editable art from the same listed software.

Various object drawing tools are included: circles/ovals, boxes (square and round cornered), freehand shapes, and lines (straight and splined). In addition, any path/object can be altered by a "smoothing" or "flattening" operation. As far as working with curved lines (bezier curves) goes, this software is much more intuitive for an artist to use than Gold Disk's *ProDraw*. There is also a tool to close open curves and another to produce circular sections.

Text/Lettering options, the central core of any DTP software, find a wealth of support in this drawing package. The software comes with its own library of fonts and styles, 17, all of them outputable to both PostScript and dot matrix devices. Once a text string is written to the screen, it can go through an almost infinite amount of transitions. It can, for instance, be set to fill any shape in an X/Y, X, or Y direction (Figure 3). But that's not all. Text can also be made to flow along any curve by the "Bind Text to Path" operator. It can be left or right justified, centered, and spaced or scaled to fit. Once the text is transformed into a graphic object and merged, it can also be placed over a blended fill so that the text looks as if it is composed of a smooth gradated screen in any direction.

Art Expression allows the Amiga user to place any structured object inside the shape of another, so that the initial boundaries of the object stretches to fit its new environment.

Conclusions

There are some features I would like to see in Art Expression's next upgrades. One is a "stop" feature that ends a rendering session immediately. I would also appreciate an "invisible" routine that loads PDraw clips, instead of the separate conversion module. I would like a future version that allows text to be blend-filled in an easier manner, preferable just by clicking on the text and having it automatically targeted with a blend. It is also time for all Soft Logik products to show true colors of blends on the screen instead of stand-in screens, which is a feature that Soft Logik's DTP competition has addressed long ago. The advent of the Amiga-4000's 256-color mode makes this more than possible. Users are also warned to upgrade their PageStream software to get the latest versions if editing Art Expression work is desirable—patches are available either on the nets or for $10 to Soft Logik. Without the proper patches installed, Art Expression will not save IFF files. Last, I would like to see absolutely all Amiga 3-D/4-D rendering and animation software—and also the translation software like *Pixel3D Professional* and *ANIMatrix*—include the DR2D format for import. I would also like to see the present text box string replaced by a direct on-screen text operation, like the process in PageStream. Art Expression is a great tool for generating 2-D primitives that can be extruded and/or lathed in 3-D. If DR2D is a "standard"—as Soft Logik claims it is—then everyone should implement it as soon as possible. Art Expression is a great new Amiga product, and will do much to push the state of Amiga artwork into new and exciting realms of visual possibility.

Art Expression
Soft Logik, Inc.
11131 S Towne Sq., Ste F
St. Louis, MO 63123
(314) 894-8608
Inquiry #201

DeluxePaint IV Videos

by Greg Epley

When *DeluxePaint IV* was introduced in September 1991, Saddleback Graphics, in association with Electronic Arts, produced a set of informative, tutorial videos for the program. Some of you may remember the excellent tutorial video Saddleback produced for *DeluxePaint III*, "Professional Techniques for DPaint III." I was understandably curious to see their work for DeluxePaint IV. What follows is my impression of these DeluxePaint IV videos, "The DeluxePaint IV Video Guide" and "Advanced Techniques with DeluxePaint IV."

Video Guide

First up is "The DeluxePaint IV Video Guide." This introductory video is recommended for beginning and experienced DPaint users. For beginners, the video offers a complete tour of the program and its basic operation. The video is not intended as a replacement for the program manual, however, as the host states. As an experienced DPaint artist, I found the "new features" section at the front of the DPaint manual far more informative than sifting through a video which covers a lot of old, familiar material.

The 60-minute video breaks down into four sections: A Brief Tour, Tools, Menus, and Basic Animation. The program features are covered in these sections in a very logical top-down manner. "A Brief Tour" is exactly that—the host appears superimposed over the DPaint screen, pointing out the drawing area, tool bar, color palette, and menu bar. As he points to these areas, the surrounding screen elements appear dimmed—a very nice touch. "Tools" delves into each of the drawing and control tools on the tool bar, beginning with the dotted freehand tool at the top left, and proceeding left to right down the tool bar. Along the way, keyboard shortcuts are shown in the lower left corner of the screen. The images of the fill and gradient fill types, utilizing an arch shape, are much better than the illustrations in the DPaint manual, as is the image depicting the various settings in the spacing types requester. "Menus" covers

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each item on each menu going from left to right, top to bottom. "Basic Animation" covers the items on the Anim menu in more detail, as this menu is passed over in the "Menus" section. In addition, because of the large number of new effects available, I think separate coverage of the Effects menu in an "Effects" section would be helpful.

The tape itself is generally very well done. The pace seems about right, neither too fast nor too slow. Features are covered in a very logical, top-down manner. Most of the features are demonstrated as they are covered, but not in a manner that invites user interaction like the tutorials in the DPaint manual. Beginners probably would find the moving video description of many features clearer than a static manual. I also liked the way features are highlighted by dimming the surrounding screen area; while this is not a new technique in such videos, it adds to the professional look of the work. My one complaint with this video is the host. I have nothing personal against the fellow; he has no control over how he looks on the tape—that is the fault of the producers—but the inferior chroma-key effect detracts a lot from the otherwise professional look of the video. I soon nicknamed the fellow "Casper, the Friendly Host," referring to his pale, washed-out look with its faint, shimmering "ghostlike" edges. I've seen other videos produced with similar equipment that look better, so I am at a loss to explain the problem here. Perhaps it was a combination of lighting, color selection, or signal loss or interference.

Advanced Techniques

One of the first things I noticed about this tape was the improved look of the host. Again, he appears quite pale—a bit like Data on Star Trek. Some fringing and "ghosting" was still apparent around the edges but was far less noticeable than the first attempt.

The 60-minute "Advanced Techniques" is dvided into approximately eight sections or tutorials. "Award Winning Graphics" covers the creation of a beveled granite background on which the emblem "FIRST PLACE" appears in a stylized gold Colorfont with drop shadows. This segment presents one way to produce an effective stone-like surface as well as to drop shadows through which the surface details can be seen. "Words of Wisdom" is actually three tutorials in one, and shows how to combine two or more Colorfonts with different palettes in HAM mode, three-dimensional multicolored text with perspective, and embossed text. Of course, these techniques can be applied to objects as well as text. Animation comes into play with the next four tutorials, whose techniques are worth the price of the tape to beginners or experienced artists. Those Amiga owners ancient enough to remember the classic "Boing!" animation will enjoy producing their own simplified version in "Play Ball." This segment utilizes color cycling, brush wrapping onto an object, animated brushes, and anim-painting with the spacing requester. "One Good Turn" presents one way to produce a "page-turning" effect from one picture to another in HAM mode. The purpose of the segment is to present techniques which will hopefully invite experimentation from the viewer. "As The World Turns" is one of the more dazzling DPaint tutorials I've seen, though the presentation seems a bit disorganized at times. My advice is to follow the example given and "trim the fat" from it as you learn more about the program. You'll find this to be true for about half the segments. "Quick Change Artist" explores the new metamorph feature in DPaint. When you complete the segment, you'll have a short, animated HAM sequence that clearly demonstrates three different morphs. "Getting Down to Business" shows some quick techniques for creating two kinds of business graphs—bar and pie. Maybe I'm just spoiled by the graphing packages available on the PC, but I can't imagine having to produce a large number of complex business graphs for an important presentation using a paint program. "A Couple of Quick Tips" demonstrates how to set up the DPaint icon ToolTypes and save custom startup presets with a specific resolution, color palette, and color ranges. I suppose this information could be useful to a beginner, but I don't consider anything that's readily available in the program manual "informative" or a "tip." Finally, the video ends with a short highlight of about

five companion products the viewer might find useful, from "DeluxeVideo III" to "The Buddy System for DeluxePaint IV."

Conclusion

I would highly recommend both "Video Guide" and "Advanced Techniques" to the beginning DPaint artist. However, I would also strongly recommend that beginners complete the tutorials in the program manual, because the "Video Guide" doesn't offer the kind of "learn by doing" tutorials offered by the manual, and the tutorials in "Advanced Techniques" are a bit much for a beginner to start with. I believe the "Video Guide" would bore experienced artists trying to sift through old, familiar material looking for something new; experienced artists can learn more about the new features from the DPaint manual and save their money for "Advanced Techniques."

The DeluxePaint IV Video Guide
Advanced Techniques with DeluxePaint IV
Saddleback Graphics
Distributed by Centaur Software
P.O. Box 4400
Redondo Beach, CA 90278
(213) 542-2226
Inquiry #202

AMOS Professional

by Jack Nowicki

Since its introduction in June, 1990, the AMOS programming system has become one of the most popular Amiga products in Europe. There are now British magazines devoted solely to programming in AMOS. User groups in several countries, including the U.S., are publishing newsletters. One of the reasons for the growth of AMOS has been the support of Europress, and the British AMOS Club. In just two years, they have released three upgrades of AMOS as public domain, fixing bugs and adding new commands.

Their latest release, *AMOS Professional*, however, is more than a minor upgrade. It is a greatly expanded version of the original language with 200 new commands, bringing the total to over 700, and several new programming accessories. The AMOS Pro package consists of a 650-page manual and six disks which includes a tutorial disk, and three disks of example programs. AMOS Pro will run on any Amiga with 1MB, and is easily installed on a hard drive.

AMOS Basics

For those not familiar with AMOS, it can be described as a BASIC style language with many additional commands. It allows you to exploit the full capabilities of the Amiga, without having to know anything about structures, libraries, and assemblers. Special screen modes such as Dual Playfield, HAM, and Double Buffered can be initialized with a single command. The Amiga's other graphics and sound features are also easily accessed. The AMOS menu editor lets you create all sorts of custom menus, and the unique AMAL "language within a language" lets you create animation programs that control dozens of sprites and bobs on a screen, independent of what the main AMOS program is doing.

AMOS is also expandable. Europress and several third-party developers have released "extensions"—collections of additional commands—for even more programming power, including a compiler, a game map editor, and a 3-D modelling system.

AMOS Professional - What's New

The first thing you will notice after loading AMOS Pro is the 2.0 look to the editor. Gone are the 10 command blocks that took up the top quarter of the screen, replaced by a sleek, single line of icons. All of the editor functions can be accessed by pull-down menus, and many have keyboard shortcuts. The block cut, paste, and move functions have been improved. You can also now have several editing windows open at once, allowing free movement from one program to another. The direct mode window has also been iconized, and can be resized. There is even an optional autosave feature which periodically will prompt you to save what you are working on. The enhancements in AMOS Pro go beyond the merely cosmetic. Added commands include those that let you load and play Soundtracker and MED music modules directly from your program, as well as IFF ANIM files.

The Accessory disk contains several programs that make it easy to create data banks for your programs. The Menu Editor and AMAL Editor are the same as in older versions of AMOS, and several new accessories have been added, such as a Sample Bank Maker that handles raw and IFF sound samples. There is an Object Editor, replacing the SpriteX program from previous versions, that allows you to draw and edit banks of Sprites and Bobs. You can draw your object from scratch or grab it from an IFF picture.

There is a powerful Disk Manager accessory, a commercial quality product in itself on the lines of *Opus*. Not only can you move, delete, and rename files easily, but it also can display an IFF picture or the contents of an object bank, play a sound sample, or even an entire Soundtracker song. The AMOS Pro Monitor is a debugging tool that allows you to step through a program and check the value of variables, while displaying a quarter-size image of the output screen.

The biggest addition to the AMOS system in terms of new commands is the Interface Resource. Like the AMAL system, the AMOS Pro Interface is an entire language subset that allows you to create control panels for your programs. You can create simple buttons, radio buttons, check boxes, horizontal and vertical sliders in all styles, shapes, and colors. An entire control panel can be defined as a single-string variable. Once the string is defined and activated, the control panel is drawn and waits patiently for user input, while the main AMOS program can be performing other tasks. AMOS Pro comes with two screens of various buttons and boxes for use with your programs, or you can create your own custom icons with any IFF paint program.

There is still more. How about a hypertext style HELP accessory that instantly brings up information about any command. AMOS Pro even supports AREXX commands. AMOS Pro contains practically ev-

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erything you need to create professional quality programs. The manual is well organized in tutorial fashion, introducing groups of related commands with short examples to type in. The manual has two indexes to help you find a specific topic or command. There is a full disk of tutorial programs—working examples that demonstrate how the AMOS commands can be utilized to create some very remarkable effects. There are also two disks containing PD quality games, again heavily annotated to help you learn AMOS programming techniques. There is even a ruadimentary data base program to show that AMOS Pro can be used for serious applications also.

Quibbles

As with almost any first version of a product of the size and complexity of AMOS Pro, there are a few initial bugs. The manual contains a few minor errors. There is a bug in the direct mode screen that causes the computer to lock up when you change directories. And, from the beginning, AMOS has been plagued by a bug that causes string variables to sometimes get corrupted when passed to and from procedures. This bug is still present in AMOS Pro, so you must be careful when you use string variables, including AMAL and Interface strings, in procedures.

Current users of AMOS will be distressed to learn that any extension programs they own will not work with AMOS Pro. Europress will be coming out with an AMOS Pro compiler, and it is expected that third-party extensions will also be upgraded soon.

The Verdict

Anyone interested in programming the Amiga should consider AMOS Pro. It is powerful, easy to use, and well supported by Europress and the user groups. For current owners of AMOS, I would recommend you consider upgrading, if only for the added power of the Interface Resource and the Disk Manager. I would suggest though, that you wait until a new version of AMOS Pro, with compiler, is available. At this time, current AMOS users can upgrade to AMOS Pro only through Europress, for an upgrade fee of 39 Pounds.

AMOS Professional
Europress Software
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Inquiry #204

CineMorph

by R. Shamms Mortier

There is a certain feeling of power one has when changing one digital image into another, like that experienced by the alchemists who searched for ways to transmute lead into gold. True, we Amiga obsessives can't quite manage to do that, but with the help of the morphing packages that are on the shelves, we can perform some pretty neat digital tricks. Image morphing is actually a process invented by Hollywood to amaze us with on-screen effects in the movies. From werewolves to "Terminator II," we've all squealed at the results.

The Software

Besides this stand-alone product, the *CineMorph* software also comes as a module in a more complete effects package from GVP. The manual is small but clearly written and indexed. The initial parts of the process are easy to understand, and you can probably do some beginning morphing intuitively without using the manual as a reference. There are three types of morphing addressed: warping a single picture; morphing one image into another, probably the most common use; and morphing animated sequences into one another, fairly complex. Input windows are used to display your image(s), over which a movable grid is placed. It is the placement of points on this grid that determine the movement of an image in the animation.

Output can be either "generated" images or sequences (24-bit frames), or "rendered" images, sequences, or ANIM5 animations. In the latter case, you can select any Amiga resolution mode, and also DCTV 3/4 bitplane and HAM-E. The number of frames in the animation can be set as well as the frames that you need to generate from that number. The size of the rendered screens can also be set, a very handy feature to have at hand. Be aware that some players, *DPaint* in particular, expect to see certain exact screen sizes in certain resolutions, and balk when the sizes don't match up.

Warping an Image ("Rubber Sheeting")

The easiest to understand morphing process is that of taking a single image and warping elements of it as if it were printed on a stretchable rubber sheet. You can take a person's eye, for instance, and enlarge it over time to bug out, or reduce it to a pinhole. For the best results, it's best to add more columns and rows to the grid mesh placed over the image, especially in areas of major movement. This allows you finer control over what will and will not move in the animation. You may have the meshed grid act as a "line" morph or as a "spline." I had much better luck with the line type, as the spline produced either unwanted movements or in some cases crashed my machines (Amiga 2500 and 4000). I don't think the spline morphs have been perfected in the software. See Figure 1 for an example of a single-image warp using the CineMorph software.

Dual-Image Morphing

This is why most Amiga users will purchase a morphing package in the first place. Oh what fun to transform your mother-in-law into your pet iguana, Bach into a teapot, or the president into Madonna. The first step in this process is to choose exactly the two images, first and last, you want to work with, and to load them into the CineMorph screens. Next, select the beginning image and carefully outline the basic shape. Work on the initial image alone at first, and avoid temptations to work on both at once. More columns or rows of points are generally needed in this process, especially when the images have very different features. CineMorph has a habit of not allowing you to move points in the mesh across row/column boundaries, so you'll have to work around this annoyance. The next thing to do is to outline the major features as closely as possible in the originating morph—eyes, nose, mouth, hairline, chin, ears if you're working with a human or animal face.

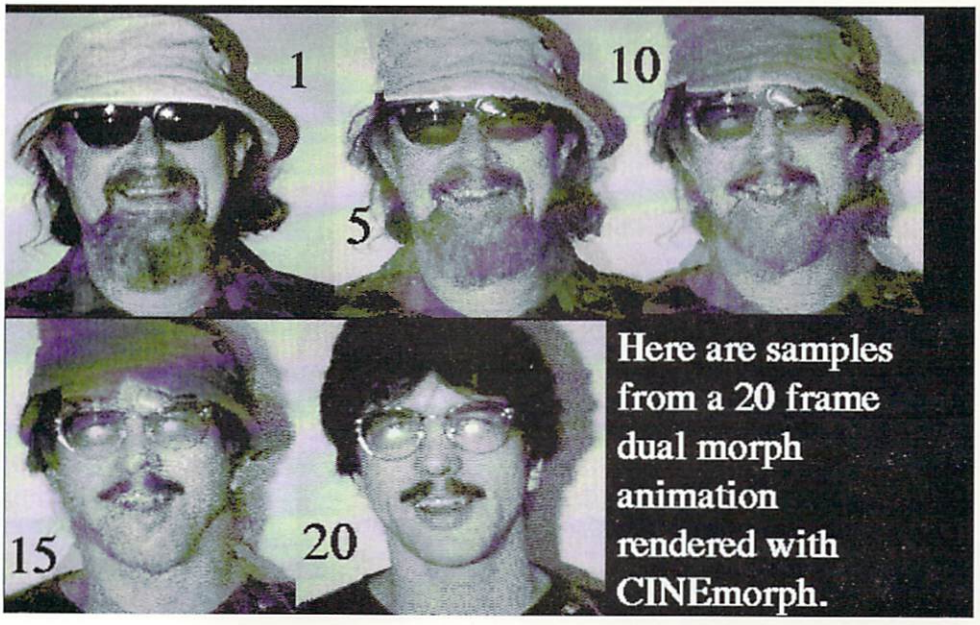
When the initial image is surrounded by the mesh points to your liking, it's time to move on to the final or target image. This is the part that takes the most time, and that also assures the best results when time is spent. When you activate (click on) a grid point in the initial image, it also lights up that same point in the target. For instance, a box outlining an eye in the starting image will appear as a box overlayed on the target image. This allows you to move it over the targets "eye" or other part so that the eye will transform over time into its target. Obviously, images that are closer together in size and content will morph more smoothly over time, presenting a more believable animation. If the splines were more workable in CineMorph, that would make a big difference here too, as splines are more liquid in movement than lines. There is another tool that is essential in this CineMorph process, or in fact, a pair of tools. These are the Dissolve and Tweening curves. The Dissolve Curve controls the blending of the two images, while the Tweening Curve controls the speed of the motions across the frames. There is a selection of choices, but this area should be more user definable in order to experiment with more obscure curve types. It's always best to preview (render) some of the mid-point frames in order to get an idea of what the animation may look like and to fix unexpected problem areas. There are always unexpected morphing artifacts that have to be fixed before you achieve a perfect morph, especially when the two images differ in size and content. See Figure 2 for an example of Dual Image Morphing.

Morphing Sequences of Images

There is a small tutorial in the manual that walks you through a sequential morph. This is the type that transforms more then two objects in animation, so that A becomes B, and then B becomes C. For this operation, you can select any number of images as "key frames," so that movements use them as targets in the final sequence. For instance, a 60-frame animation might have four key frame targets, perhaps at 1, 20, 40, and 60. If you've ever seen the wonderful morphs accomplished for Michael Jackson's latest videos, where faces of every race and gender melt into one another, you will appreciate the power of sequence morphing. A zoom feature would be most welcome here as well, because two images are complicated, and adding another multiplies the complication factor. This is also where an onion skin overlay screen would be most helpful, and would save time in the meticulous movement of hundreds of points.

Conclusions

Though rendered frames might be useful as previews with CineMorph, quality results can only be obtained with the 24-bit option. I would even say that DCTV users should render their work as 24-bit first, and then import it into DCTV. This produces better results. There are qualitative differences in the way that Amiga morphing software packages allow the user to use



morhing to transform objects. All of the morphing software is fun to play with, but some packages are more professionally oriented then others. By "professionally oriented," I mean the ability to get down to the nitty-gritty and work on a pixel-by-pixel basis. To do this effectively, the tools have to be visibly vector-oriented, meaning that movements must be controlled by altering their discreet direction over time. It is also necessary that unwanted obstacles not be placed in the way of the creative process, such as the inability to move across the "boundaries" of other points if desired, or the inability to "protect" areas from morphing stretches.

Quality zooming features are also a necessity, since without them, working in small areas is an impossibility. Another very helpful feature, almost vital for professional results, is an "onion skin" screen. This allows the user to place a beginning frame and an ending frame together in a transparent sandwich so that points and vector movements can be accurately placed and calculated. There are two other good morphing packages on the Amiga: *MorphPlus* from ASDG and *ImageMaster* from Black Belt. CineMorph is definitely the most economical of the three, but has limited use in a professional setting in its 1.0 incarnation because of its present lack of the tools referred to. CineMorph is a good package to have fun with and to introduce the Amiga user to the joys of creating morphing animations, but it is not the best choice for fine tuned professional results because it lacks many of the tools considered vital to a high-rquality broadcast or film special effects end product. With the present edition of CineMorph you'll be able to amaze and confound your friends. This software could be just what you crave if your Amiga work isn't involved in the professional arena. I hope that for those of us who use morphing for more broadcast-oriented work, future editions of this product will include more of the needed professional options.

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Inquiry #203

Amiga Action Replay MK III

by Henning Vahlenkamp

One of the things I miss about my old C64 is its ability to use ROM cartridges—essentially ROM chips on circuit boards that plug into the computer. *Super Snapshot 5*, for example, contains lots of utility programs and powerful programming tools in a 64K ROM. Best of all, no loading is necessary; the software is instantly available at the touch of a button. Now ROM cartridges are here for the Amiga with Action Replay MK III, AR3 for convenience, a British import.

While it may have been patterned after C64 cartridges, AR3's scope and power extends beyond any of them. Its primary interface consists of an 80x25 text screen supporting a full-screen editor, C64-style. This means you can move the cursor anywhere on the screen, type any of the 136 supported commands, and press return to execute it. These commands, which will be discussed shortly, cover an enormous spectrum of functions. Text can also scroll up and down. Even if you're not an old Commodore veteran, you'll quickly become familiar with the interface. In addition to this spartan setting, there are several screens with the more familiar gadgets and mouse support.

The heart of AR3 is a 256K ROM and a small amount of RAM for temporary work space. These are combined on a small board with a red button, a toggle switch, and a knob. The A500 and A1000 versions plug into the expansion bus, while the A1500/A2000 version fits into the processor slot and comes with a remote unit. (Available only in Europe, the A1500 is basically an A500 put into an A1000-like case.) Pressing the button freezes whatever the computer is doing, activating AR3. Thus AR3 is independent of AmigaDOS. You can exit by pressing x. The switch turns slow-motion mode on and off, and the knob adjusts the computer's speed from very slow to normal. This feature is ideal to slow down fast-moving games.

General Functions

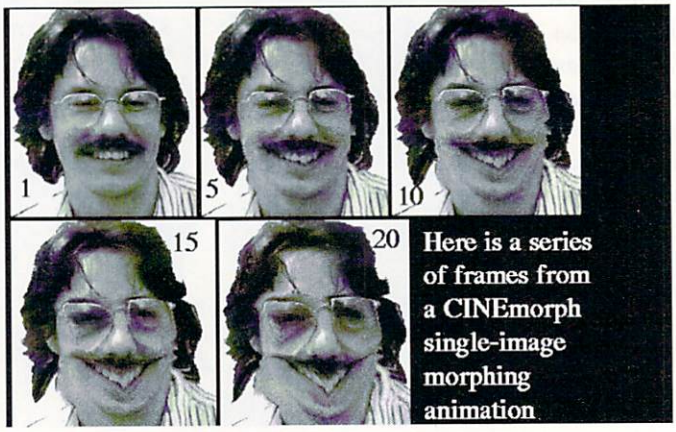
When you activate AR3, you'll find some general purpose functions in addition to the typed commands. Pressing the Help key reveals a summary of the entire command set, shown one screen at a time. F8 shows a similar summary for mempeeker, the picture editor. All other function keys have uses too. You can clear the screen, toggle insert mode, toggle German and US keyboards, dump the screen to the printer, switch to a spare screen, enter preferences, among other things. Shift pauses scrolling, and ESC is the general command-abort key.

The preferences screens are displayed by pressing F3. All options are selected via gadgets, and can be saved to disk. Unfortunately some of them don't work. Working features include a virus checker, autofire feature controlling firing rate for games, color selector and screen blanker only for the AR3 screens, and disk drive shut-offs. Not working are the memory shut-off, disk drive boot selector, and the no-click option. None of them seem to do anything at all. Since this is the third revision of the cartridge, I wouldn't have expected these kinds of problems.

DOS Commands

This group of typed commands resembles AmigaDOS commands to some degree, and only works with AmigaDOS disks in floppy drives. The syntax is somewhat unusual and non-uniform, as drives are referenced by number only, as in 0: instead of DF0:, and some commands support commas as well as path descriptions in their parameters while others don't. Those that don't recognize paths require you first to switch to the appropriate drive via CD. In fact, non-uniformity extends to many other types of commands, making memorizing command syntax more difficult than necessary.

The DOS commands include most of the usual functions such as CD, COPY, DIR, DELETE, FORMAT, INSTALL, MAKEDIR, RELABEL, RENAME, and TYPE. Some unique DOS commands are added. For example, DISKWIPE scrambles all data on a disk very quickly, rendering in unreadable. DISKCHECK scans for errors. SAFEDISK acts like SetPatch, fixing Kickstart 1.3 bugs, al-



Here is a series of frames from a CINEmorph single-image morphing animation

though I can't imagine why anyone would want to do that, since AR3 doesn't even use Kickstart. It does a few other miscellaneous things like turning on write verify.

There's also a fast disk copier, DCOPY, and a more sophisticated burst nibbler. The nibbler, which opens a custom screen, can copy MSDOS and Atari ST disks in addition to Amiga disks. Its name is misleading since the word "nibbler" leads you to believe it will copy protected disks, but it doesn't. Strangely, both copiers only worked with 0: as the destination drive.

AR3 gives you limited disk security with boot protection and disk coding facilities. Boot protection writes a user-specified code to a disk's bootblock, subsequently requiring you to enter it in order to boot the disk. Disk coding also uses a code to encode disk writes. Thereafter you must enter the code to decode disk reads when you want to load something. Both of these features are flaky and confusing to use, so they're best avoided.

Monitors

A group of disk monitor commands allows you to manipulate disks. RT and WT read disk tracks into memory and write them from memory to disk, although they're unreliable on protected disks. DMON shows the memory address of the disk buffer, and CLRDMON deallocates this memory. BOOTCHK, DATACHK, and BAMCHK calculate checksums of sectors. Once disk data is in memory, it can be further manipulated with the machine code monitor.

The machine code monitor, consisting of 40 commands, is a key feature of AR3. With the monitor you can do just about anything imaginable to the computer's memory including loading and saving files; comparing, transferring, and searching blocks of memory; viewing and editing memory, CPU, and all chip registers in numerous ways; assembling and disassembling CPU and copper instructions; tracing and single-stepping execution; setting breakpoints and watchpoints and more. This is nothing short of heaven for serious machine-level programming.

Needless to say, directly working with memory can corrupt anything running prior to activating AR3, so you have to be careful. Another great thing about the monitor is that if you crash the machine, you only have to reset it, push the red button, and you're back in business again. With disk-based monitors, you have to reload the OS, then reload them, making them a lot less convenient. The manual doesn't attempt to teach assembly language or Amiga architecture.

AR3 has several utilities that let you grab things from chip memory-programs, pictures, music, and samples. Grabbing programs is probably the least useful, since the grabbing process seems to continue endlessly, never finishing if you have more than 512K. Besides, the only programs not stored in AmigaDOS files already are games, and they usually don't load into memory all at once, making grabbing the memory-resident portion pointless.

The picture ripper, mempeeker, is much more useful, especially for saving winning screens from games and for game reviewers!

When you activate AR3, the screen from the frozen program can be viewed by pressing P. At this point you can press various keys to alter the picture in many ways including scrolling the picture, changing brightness and colors, toggling dual-playfield and HAM modes, adding and stripping bitplanes, and various other things. And altering the frozen picture doesn't ruin the original one. Pictures are saved as standard ILBMs.

There are two different ways of grabbing sound—,TRACKER and SCAN. TRACKER attempts to locate different "tracker"-style music modules. These modules represent a loose music format that should have been standardized and incorporated into IFF. A number of games, particularly European ones, use them.

SCAN, on the other hand, brings up a screen that lets you analyze all of chip RAM for sound samples. You just "play" memory, gradually narrowing the range and zeroing in on wherever a sample may be found. Experiments also revealed that many games use samples. Unfortunately, while SCAN saves in 8SVX format, it doesn't strictly adhere to it. Commodore's IFFCheck program (FF#185) says AR3's 8SVXs are mangled. Depending upon how strictly your software follows the official 8SVX standard, the samples may or may not be compatible—an embarrassing faux pas.

Trainer

As if the above weren't enough, AR3 throws in trainer commands. The trainer allows you to get infinite lives, energy, etc, in games by finding addresses in memory where these variables are stored. Then you can modify their values to whatever you want or have AR3 find and eliminate all instructions that decrease them, effectively making them infinite. This isn't always successful, since many games use more complex ways of recording these things. If the trainer fails, you can try the more powerful deep trainer which still has limits and can get very tedious. Nevertheless, these features are definitely worthwhile.

For Good Measure

Finally, AR3 includes some miscellaneous commands. The highlights are compressing/decompressing memory, editing sprites (via a matrix of numbers 0-3 representing colors), showing the ROM version—mine is V3.09 10/13/91—of AR3, switching NTSC/PAL modes (ECS Agnus required), showing an ASCII map, showing any or all of the alert (guru) numbers and their meanings, and sending a text string to the printer. Several other commands display various system information valuable to programmers such as memory amounts, resident libraries, interrupts, CPU exceptions, resources, chip register names, devices, tasks, and ports.

Among the miscellaneous commands are two more prominent features—MEGASTICK and SETMAP. MEGASTICK is used to program the joysticks to act as certain keys depending upon the direction of the stick and state of the fire button. SETMAP opens a screen on which you can edit the characters assigned to the keys of the keyboard in order to create custom keymaps. Both of these commands install patches to Workbench, and have no effect unless it is running.

Conclusions

As you can see, AR3 packs an exceptional amount of functionality into its 256K ROM. On the negative side, you pay for it with some irritations and bugs. In addition to the problems I mentioned, AR3's NTSC screen isn't centered on the monitor properly; the bottom row of text is obscured. The 64-page indexed manual is acceptably written overall, but sometimes a little vague and too brief, failing to document three monitor commands and one miscellaneous command. The help screens explain them.

This product is best suited to A500/A1000 owners, as A1500/A2000 owners will be reluctant to give up prized processor slots. All versions support hard disks, ECS chips, and up to about 4MB RAM; more RAM reportedly causes AR3 to crash. Since AR3 is so tightly bound to the hardware and CPU in its operation, it probably won't work with any 68020-040 accelerators, but I can't confirm this. Using it with AmigaDOS 2.04 requires a ROM switcher, as it falsely reports a virus under Kickstart 2.0 then hangs up when you exit AR3. With a switcher you can exit, switch to Kickstart 1.3, then switch back to 2.0. Released after 2.0, AR3 should support it directly.

In the future, I'd like to see some improvements starting with fixes for all the problems. Furthermore, AR3 could use a sprite-collision-detection disable for games, support for a 50-row text screen, and a quick reference card summarizing all commands. A redesign of AR3 on a PCMCIA card for the new Amigas would be nice too, supporting their new features.

When all is said and done, the question remains whether it's worth the $99.95 cost. Programmers, hackers, and avid gamers will find it invaluable, but others probably can live without it. One last note: as the manual clearly states, AR3 isn't intended for piracy.

Amiga Action Replay MK III
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MITE AVISTA

by Terence Byrnes

Imagine finding a local multimedia lab where you can explore the full range of the Amiga's video, graphics, and sound capabilities. This lab would boast accelerated Amigas with 24-bit graphics cards, frame-grabbers, video editing, scanners, digitizers, RGB projectors, sound samplers, and MIDI keyboards. Imagine, as well, a trained staff to help you, and the company of talented musicians, designers, artists, and technicians at work on their own projects. And as long as we've gone this far, we might as well make the entire experience free of charge, except for an occasional workshop fee of only three dollars.

This multimedia lab does exist, but there's a small catch. To use it, you have to be a student at Concordia University, in Montreal, Canada.

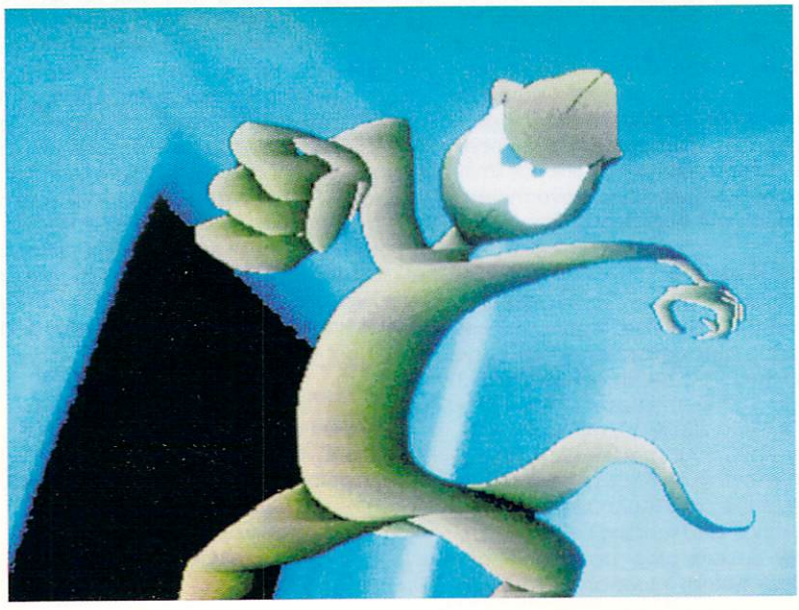
Concordia is one of two English universities in the French-speaking city of Montreal. It has a history of serving the needs of working people, and many of its 22,000-plus students are adults, of every age and profession, who study alongside 19-year-olds in their first year of university.

Considering this tradition of diversity and service, it's no surprise that an Amiga lab open to all students, not just people registered in special programs or classes, would flourish at Concordia.

The lab, which carries the unwieldy name of MITE AVISTA (for Multimedia Interactive Technology Environment Audio-Visual In-Service Teaching Area), was the inspiration of its director, Helen Workman. Workman has degrees in Cinema and Educational Technology, and became fascinated with the uses of computers in media education when she read a draft proposal for the media lab at the Massachusetts Institute of Technology. "From this proposal," she says, "I realized MIT was getting tons of support so their very best and brightest students could invent the future. The more sophisticated tools you provide for the creative students, the further they will extend themselves, and go to the boundaries of technology and beyond."



The thrilling prospect of allowing students to invent the future led Workman to apply for a grant from Commodore Canada in 1989. The company came through with ten 2000-series computers and 19 monitors, enough for 10 work stations and a monitor "wall" that can be used for visually interactive teaching and learning. (In this situation, students output to the wall and the instructor outputs to a large screen or video projector.) Since then, the lab's hardware and Workman's belief in its educational potential have both expanded.



The students use the Amigas for all sorts of creative work.

A look at Concordia University's Multimedia Interactive Technology Environment Audio-Visual In-Service Teaching Area

"We train our young people in front of televisions that flash, flash, flash with quickly changing images, and then we bring them to school and teach them the same old way—print on pages and Dick and Jane," Workman says. "Get children on a computer at a young age and they're in control!"

The students who use MITE (pronounced "mighty") AVISTA are almost all products of the television age, but they use the video screen as a tool, in the same way an earlier generation might have used a notebook, editing block, or light table. On a typical day in the lab, the busy staff might see dance students editing a video of a performance, a computer artist grabbing frames from a tape for her 24-bit creations, commerce students investigating the use of the Amiga for business presentations, an English student designing a literary magazine, a musician composing a sound track for a friend's film, and a class of animation students learning the ins and outs of 3-D animation.

The lab even hosts a 3-D Cinema Animation course using *Imagine 2.0*, and taught by Stephen Menzies, whose award-winning animations are well-known to the Amiga community.

"That's one of the things that makes this lab unique," Workman declares. "We're open and interdisciplinary. The engineering student who's into music is as welcome as the fine arts student. I don't want to come in here and just see a wall of text and word processing. Then I would feel I had really failed."

The students who use her lab prove that failure has not been one of Workman's problems.

George Liem, for example, is a 29-year-old Interrelated Arts student who recently won an international award for his computer painting, "Under Water Land." The competition was sponsored by NHK, a large Japanese television network, and was open to artists working in any medium. Liem, who created his painting with the Video Toaster and its paint software, *Toaster Paint*, was one of only three students from North America chosen to travel to Japan to show and discuss his work.

It's also striking that the only other computer art in the exhibition was created on IRIS work stations. IRIS is a high-end computer dedicated to graphics, and sells for many times the price of the accelerated A2000 and Video Toaster that Liem used.

Liem often starts his compositions with a scan—of origami paper, for instance—or a frame grabbed from video. He then modifies the original image with a series of brushes, spending days to create 24-bit paintings and 3-D renderings that involve subtle and complex layerings of texture and color.

"The nice thing about Toaster Paint is that it's a very painterly program," Liem says. "You can define the brushes as opaque, solid, or transparent, and that freedom in handling light and color is like conventional materials. The only difference between my conventional work and my Amiga work is that on the computer I'm painting with light."

Another aspect of computer art that pleases Liem is that it involves no waiting. "The art is there," he says. "You don't have to wait for the paint to dry to see what it's going to look like."

George Liem and several other students work for the lab as well as at the lab, giving workshops and sharing their knowledge with any newcomers who stare apprehensively at the glowing technical mysteries surrounding them. Lab Director Helen Workman says the "boggle factor" is high for first-time users.

Danielle Comeau, a graduate student in Communications, has been working at the lab for almost three years while pursuing her



The MITE AVISTA lab is not limited to art and graphics students. The Amigas are used for a variety of different projects.

own interests as a video producer and designer of interactive teaching materials.

Comeau's most fascinating project is a unique, interactive presentation designed to teach street kids about the dangers of AIDS. Its graphically direct approach fills screens with scanned and frame-grabbed images of needles and condoms. Using the mouse to control a presentation produced with *CanDo* authoring software, the viewer navigates through the screens while listening to the accompanying music, and is instructed in the proper use of condoms and the necessity of cleaning shared needles with bleach and water.

Comeau has already received a grant for $11,000 from Concordia to assemble her pilot, and she hopes to interest the Center for Disease Control in Atlanta in her project.

"In the end," she says, "we'd like to put the program out on an interactive CD with a touch screen and place it in video arcades all over North America. I've tried to make use of the really superb interactive multimedia capabilities of the Amiga, using sound, animation, and visuals to create an interesting educational tool. Interactive media are great in this respect because they actively engage the viewer in a way that videos don't. For street kids, the only thing that works better than this is peer counseling."

Comeau feels that her independent video productions, which have appeared at film and video festivals across North America, owe at least some of their success to the facilities available to her at Concordia's Amiga lab. "We've used scanned images as transitions after modifying them in *Deluxe Paint*, and we also rely on *Broadcast Titler, Elan Performer*, and the looped and multi-track sounds we get from *AudioMaster III*.

"For us, the Amiga is probably the best computer for bringing together visuals, sound and video. I can't see myself being able to afford to do this on any other platform. Some people might consider the work I do sort of 'marginal' because of its subject but, for people like me, the Amiga lab makes fairly advanced tools incredibly accessible."

Helen Workman's first assistant, Stefan Buchholz, was a Computer Science student who took his multimedia experience from the university into the business world. The production skills he learned from his fellow fine arts and communications students helped him land a job as a programmer-analyst for a company that gives legal advice to medical personnel.

"When I started working here," Buccholz reports, "we used to prepare our documents by cutting and pasting, spending $20 to have a slide made, then waiting a day to get it back." At Buccholz's suggestion, his company spent $45,000 on video production equipment, and bought an Amiga 3000T and a film recorder. The other computers in the company are linked to the Amiga, which is used for desktop publishing. Buccholz has written ARexx scripts that let him import files from *Harvard Graphics* into *Art Department Professional*, save them as 16-color IFF files, convert them to 3-D objects with *Pixel 3D*, and output to tape with *Lightwave* and the Video Toaster. The result, according to Buchholz, is "a great business presentation chart in 3-D video."

And, with the A3000 and film recorder, slides now cost .50¢ and "come back" right away.

Stefan Buchholz's successful experience illustrates one of Helen Workman's notions about multimedia and the future of our service-oriented economy. "This kind of technology is burgeoning, it's spreading in all directions at once," she says. "But there's nobody training people to step into the enormous job market that the technology will produce. The people who come through this lab aren't going to be unemployed. They're going to go out there, they're going to take this technology and shape their environment, and their place in that environment."

The Amiga lab's involvement with art, business and science contradicts the "ivory tower" stereotype of university life. The constant stream of visitors to the lab includes entrepeneurs interested in multimedia productions to promote their ideas and products, as well as professional artists and videomakers. Recently, Canada's renowned National Film Board invested in Amigas after a demonstration of its animation capabilities in the lab.

This productive combination of technology, imagination, and educational innovation make Workman's lab a wonderful place to show off the Amiga's potential. Workman appreciates the generosity that hardware and software producers have shown to her lab, and she respects them by rigidly enforcing copyright regulations. The user interface that opens on the monitor screens at MITE AVISTA makes it very difficult for anyone to copy software from the hard disks at any of the work stations, and it's not unusual to see Workman make a quick tour of the computer room to see what everyone is up to.

Excitement over the possibilities and challenges that the technology offers is the order of the day at MITE AVISTA. Students and staff appreciatively surround screens or study the monitor wall to glimpse each other's work. New software and cards arrive for beta testing. Faculty and students work into, and sometimes through, the night. On learning that some computers in her building were named "Zeus" and "Apollo," Workman decided that "here, we're going to have the creative, nurturing mothers," and promptly named each of her machines after a goddess. Workman says she has even been playfully accused of "running a cyberpunk nursery."

Lab "graduate" Stefan Buchholz may have provided the best description of all though. "MITE AVISTA is unique because it's open to absolutely everyone," he says. "And as a result, it has attracted the best and most creative students I've ever met."

•AC•

For more information on the MITE AVISTA lab, write:

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bug bytes

The latest in tips, workarounds and upgrades

by John Steiner

product: A-MaxII
re: black or white border
source: EMail

In EMail this month, Chris Brenner made some further observations in regards to the letter written by Jonas Greene in "Bug Bytes,"v7.12.
He writes, "I too have had problems with version 2.51 of the A-MaxII software. As Mister Green states in his letter, sometimes the border is black and sometimes it is white. I have noticed that this problem occurs only on Amigas with the 512K Agnus. It seems that A-MaxII is sensitive to the way memory is fragmented and will not install the border-blanking routine in certain cases. As I have not consulted with the author of A-MaxII on this subject, I'm not certain whether or not this action is intentional.

"I have just received version 2.53 of the A-MaxII software from ReadySoft. I have not yet tried it on the 1000 to test if the problem with the border blanking is still present. If Mr. Green mailed in his registration card, he should be receiving an upgrade from ReadySoft shortly."

product: Hurricane Accelerator
re : inability to boot
source: EMail

Rob Knop also left EMail this month regarding earlier "Bug Byte" references to the Hurricane Accelerator board. He writes, "The system I use now is an A2000 with the ICD AdSCSI 2000 hard disk controller (version 1.92 ROM, an older one), a 52MB Quantum hard drive, two internal floppies, 1MB of chip RAM with the ECS Agnus and the Hurricane 28 MHz '030/'882 Card with 4MB of 32-bit RAM.

"I do have Hurricane running with the 2.1 SetPatch; it has problems, but the problems are the same as the ones I had with 2.04. Once I put the Hurricane board in, I couldn't get the computer to boot at all. Eventually, I figured out that I could not boot with the Microbotics 8-up board and the hard drive card in. As long as I had the hard disk card set to auto-mount the hard drive, the computer would not boot. Therefore, I can boot only from floppy. What I did was to make a copy of the Workbench 2.1 floppy and replace that startup sequence with the following:

```
c:Run >NIL:
sys:HurricaneConfig -a
sys:AddMem32 >nil:
C:SetPatch QUIET
c:CPU BURST CACHE FASTROM
c:Mount DHi:
;Most people's DH0: and DH1:
c:Mount DHj:
c:DefDisk Ariel:
c:cd sys:
c:run >NIL: <NIL: execute
S:Startup-sequence
c:endcli >NIL:
```

"I'm not really sure why that first Run line is there, or even if I need it, but since changing this means several reboots of trial and error, I just leave it.

"Next I run HurricaneConfig. You will notice that I don't have -r, meaning I am letting HurricaneConfig install KickStart ROM in 32-bit RAM. Now, this being an old board, it only does it to 256K of KickStart ROM. I will later use the 2.1 command "CPU" to install all 512K of ROM in 32-bit RAM, meaning that this first 256K is wasted. I am not happy about this, but with major experimentation I found that this was the *only* way I could get everything running and have both the instruction and data caches on the '030 enabled.

"I then add the 32-bit memory. After that, I run SetPatch. I found that if I try to run SetPatch before HurricaneConfig and AddMem32 the computer crashes before it finishes booting.

"Next is CPU. Here I enable both caches, most likely redundant at this point, set burst mode, and copy all 512K of ROM to 32-bit RAM. Finally I mount the two hard drive partitions. I have the ICD entries in my Mountlist on the boot floppy. Although booting from a floppy might seem to be a pain, it's not so bad. Since 32-bit RAM isn't available to the system until after AddMem32, it is better for me to mount my hard disk partitions here because whatever buffers are needed are allocated from 32-bit memory rather than CHIP RAM.

"Then I use the command I acquired from the original owner of Hurricane, "DefDisk," which changes the default disk (which starts out as the disk you boot from) to my main hard drive partition. That's what "Ariel" is; my computer's name is Miranda and the two hard disk partitions are named Ariel and Caliban. This also takes care of setting the preferences settings that I have on my hard drive."

"The next cd sys: now sets the directory to the new default device Ariel:. Finally, I run the standard 2.1 startup-sequence from the S: drawer on my hard drive. The only change I made to the standard 2.1 Startup-sequence was to comment out the SetPatch line, SetPatch having already been run on my boot floppy.

"Finally, I get rid of the CLI, since my user-startup opens up another one tailored to the overscan screen that I use. Thanks to the fact that most of the OS is in ROM, it doesn't take much longer than booting from the hard drive ever did before I had the '030 card."

product: AT Bridgeboard
re: workarounds
source: EMail

Also in EMail, I received a letter from Mark Odell in regard to Paul Tibbals' problem with his AT BridgeBoard and PC-side Ethernet card mentioned in "Bug Bytes, " V7.12. Mark is an Amiga service technician with a lot of valuable information regarding Amiga accessories. He writes, "Mr. Tibbals didn't specify what brand of Ethernet card he has, but it is quite probable that the particular brand of Ethernet card he is using is not compatible with the A2286. The first thing I would suggest is that he should try an "EtherLink 16" card made by 3Com, being used very successfully with the A2286 on an A2000. The files that are necessary to make that card work are named 3C507.EXE, IPX.COM, and NETX.COM.

"Mr. Tibbals should make sure he gets the 16-bit AT-bus card, because according to our customer the 8-bit version of the card does not work. Both AT slots on his A2000 motherboard will then be occupied, so if he needs two more AT slots, he will have to have extension connectors added to the motherboard.

"If the above doesn't solve

his problem, then I would suggest that since his previous Arcnet card worked with no trouble, he should try several different brands of Ethernet card in succession to find one that is compatible with his AT BridgeBoard. To facilitate such trials, he should also cultivate a relationship with an understanding PC-clone dealer in his area, from whom he can order several brands of card, and to whom he can return cards that don't work. The PC dealer might even be able to suggest other things to try."

Mr. Odell continues, "Incidentally, problems with card incompatibility are not limited to the various BridgeBoards: "real" PCs have these problems too! Mr. Tibbals might also have his local Amiga dealer: 1) separate the two sections of the AT Bridgeboard, and clean the female IDC connectors; 2) carefully remove each of the five big square chips one at a time, clean them and their sockets, then re-insert them; 3) put the two sections back together and try it in the system, and if this doesn't work, try a new AT BridgeBoard."

product: Bernoulli cartridge
re: troubleshooting lockup
source: EMail

Regarding a lockup fix for the Bernoulli cartridge, Mr. Odell writes, "If I had Mr. Kwan's system here on my workbench, here is how I would begin to troubleshoot it:

"I would find out by calling Iomega's tech support number [801-778-1000], whether or not the model(s) of Bernoulli Box he has is a true SCSI device. Some of the early Bernoulli Box models were SASI devices (Shugart Associates Systems Interface, a command set that predates the SCSI standards), and that kind definitely *will* lock up a SCSI bus. At the same time, I would want to know the most-recent revision of the drive's controller ROM, and obtain that if it's required and feasible. The latest models of Bernoulli Box might require a proprietary SCSI controller, so it's possible that the model he has also requires such a controller. Iomega tech support should be asked about this as well.

"I would (then) check the revision number of the A3000 motherboard. This can be found silk-screened on the board at the front of the machine if you remove the sub-assembly containing the power supply, floppy drive, and hard drive. If it is 7.2 or higher, it is most likely good. If it is lower than 7.2, there may be a problem with the SCSI bus itself. Here are some problems I have heard of with early A3000 PCBs.

"1) Revisions previous to 7 had SCSI-bus-terminating resistor packs soldered directly onto the motherboard, rather than being socketed as on later revisions. There can be potentially a problem with either too many bus terminations, or terminations in the wrong place on the bus if other SCSI devices are added. The only cure, short of a motherboard upgrade, is careful experimentation with placement of resistor packs.

"2) Some early revisions had diode D800, which provides termination power to pin 25 of the external SCSI connector, forwards according to the silk-screen but backwards electrically, preventing any voltage from passing through to pin 25.

"Mr. Kwan might be then looking at a motherboard swap."

Next, Mr. Odell continues, "I would check the terminations: where are they physically connected on the bus? Sometimes terminations can look like they're OK and be wrong for that particular SCSI bus. The usual rule is that the last external device on the bus gets terminated, but there can be exceptions to that rule in the real world. Controlled experimentation is called for here.

"I would (then) verify the SCSI IDs. Ordinarily, the boot hard drive on an A3000 should be set to 6, and all other devices should be set in descending order from there (5, 4, 3, etc.). There are a very-few rare cases in which the boot hard drive should be set to 0, then all other devices in ascending order, but that's a last resort. Again, controlled experimentation is called for. I would also make sure that the two Iomega drives really are set to different SCSI IDs.

"The next thing I would do is check termination power to pin 25 of the external SCSI connector. This can be checked by measuring pin 25 for +5VDC. If this termination power is not present, and an external 50-pin termination plug is used or if his Iomega drive is jumpered so as to tap termination power from the SCSI bus rather than the drive's power connector, intermittent or consistent SCSI-bus errors can occur.

"I would disconnect (if possible) one of the two Iomega drives and see if I could get the system to boot up with just one attached. Then I would try bypassing the existing cabling to the Iomega drive with a known-good external SCSI cable directly to the 50-pin IDC connector, because it could be a cabling problem, and because there are external cables that are too long and/or have excessive internal distributed capacitance, and so don't work with the Amiga's external SCSI port.

"I would try the Iomega drive, with the same known-good cable attached, on a different make of SCSI host adapter, for example, GVP, just to see if the drive will permit a different Amiga to boot up successfully, then run a utility such as SYSINFO 3.01 (Fish 760) or SCSI_LISTER to see if the drive appears on the SCSI bus.

"After that, I would check the A3000 ROMs (U181 & U180); they should be at least -02. There could also be a flaky SUPER DMAC chip, which he would have to have his dealer order and install for him.

"If Mr. Kwan has tried and exhausted all the foregoing steps, at that point we would have to see the system in our shop to determine the next to try. It's very difficult to troubleshoot Amigas (and SCSI buses) on remote, because there are so many variables and unknowns, so we always insist on seeing the system for ourselves.

"After that, Mr. Kwan should check the version of the controller ROM on the RODIME 80 Meg. Try the RODIME 80MB on an A2000 with an A2091 SCSI host adapter; see his local dealer for that. Try the GEMSTONE tape drive on an A2000 with an A2091 SCSI host adapter, to the extent of running a utility such as SYSINFO 3.01 (Fish 760) or SCSI_LISTER, to find out who was the original manufacturer. Then call the manufacturer and ask if the ROM it has in it is generic or special, if it supports Reselect (Disconnect/Reconnect), and also get a spec sheet showing the jumper functions.

"Check to see if some kind of utility was provided with the GEMSTONE tape drive to turn off its Reselect flag. If not, try Ami-Back in Synchronous mode at his local dealer."

Many thanks to Mr. Odell for taking the time to write such thorough and descriptive suggestions. The information on SCSI troubles is really useful for everyone who has ever had a problem with any SCSI device. Mr. Odell's comments should help many people who have run into problems with multiple SCSI devices on the Amiga SCSI ports.

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Circle 102 on Reader Service card.

A Head Start

Forging a Head with the Imagine 2.0 Forms Editor

By Henrik Martensson

Imagine 2.0 has built a reputation as one of the best 3-D graphics programs available on any computer. The reputation is well deserved, not only because it packs a lot of powerful features, but also because it is easy to use. Some of Imagine's features may, however, require a bit of effort on part of the user before they feel as friendly as the rest of the program. In particular, it may be difficult to come to grips with the Forms editor.

Slicing the Salami

Imagine is a modular program, consisting of several specialized editors. The Forms editor assists in the task of creating the basic shape of an object. It deals only with basic shapes. Geometric details and attributes must be added later in the Detail editor. Working with the Forms editor, you start by creating one of two basic shapes, either a sphere or a cylinder. In Imagine terminology, you work with a "Former View" or a "Spacer View." The shapes are divided in a number of slices. Working with a cylinder puts some restrictions on what we can do, because cylinder slices are always plane. They do not bend like the slices of a sphere. For a first project, this limitation is a boon, as fewer things can go wrong and mistakes are easier to correct. You can think of the slices as somewhat stiff slices of a salami. By manipulating the shape of a slice, you can easily change the shape of the whole cylinder.

Key Slices

The next important concept used by the Forms editor is that of key slices. When an object is first created, it has one key slice. If the shape of the key slice is changed, the shape of all the other slices in the object will change too. If another slice is designated as a key slice, things will become more interesting. If you give the key slices different shapes, Imagine will interpolate the shapes of the slices between them to create a smooth transformation from one shape to the other. If it doesn't make your head ache to much, you can think of it as morphing over a spatial dimension instead of over time. Again, it is easier to work with a cylinder shape, the "Spacer View," because all the slices, initially at least, have the same size.

Forging a Head

Let us try to create an interesting shape. A human head would be a challenge to create with most 3-D programs, but with the Forms editor, it's not very difficult. We will sacrifice a bit of artistic freedom and realism in favor of ease of use, and work with the "Spacer View." Start Imagine and enter the Forms editor. Select New from the Object menu. When the requester appears, change # of Points to 20 and # of Slices to 15. Select One Spacer View, because we are going to work with a cylinder. You should also click on Seal Right End; otherwise, there will be a hole in the top of our head. We want to use Y-Z Cross Section. This means the slices will be seen from above the head. Since we want to make the left and right sides of the head symmetrical, we also click on the Y-Axis gadget under Cross Section Symmetry (Fixed). Now click on OK.

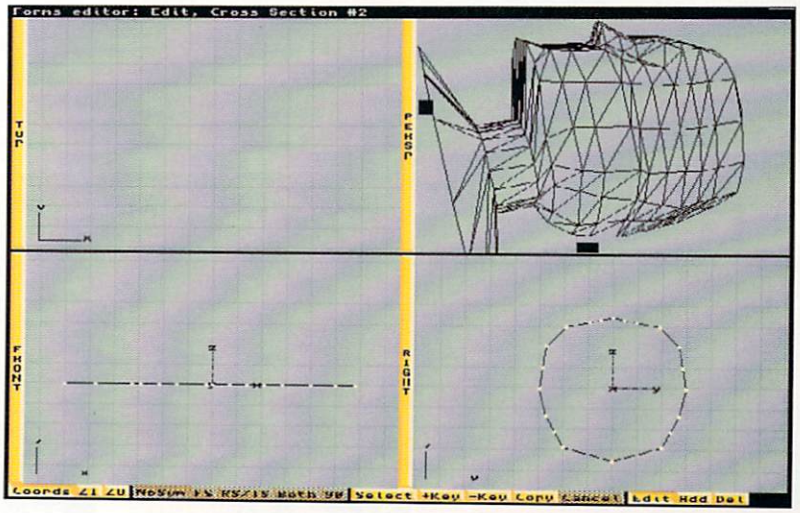
The Front window will show us a horizontal dotted line. Each dot represents the position of a slice in the cylinder. Think of it as a salami lying on its side. The Right window shows us a slice of the salami, as it would be seen if it were on a platter. This particular slice happens to be our only key slice, represented by the rightmost dot in the front view. The Top view is empty, it's not used in the "Spacer View," and the Perspective window shows our cylinder in all its 3-D glory. Select Solid or Shaded from the Display menu to get rid of the hidden lines in the Perspective window. Use the sliders to turn the cylinder around and check that the right end is closed and the left is open.

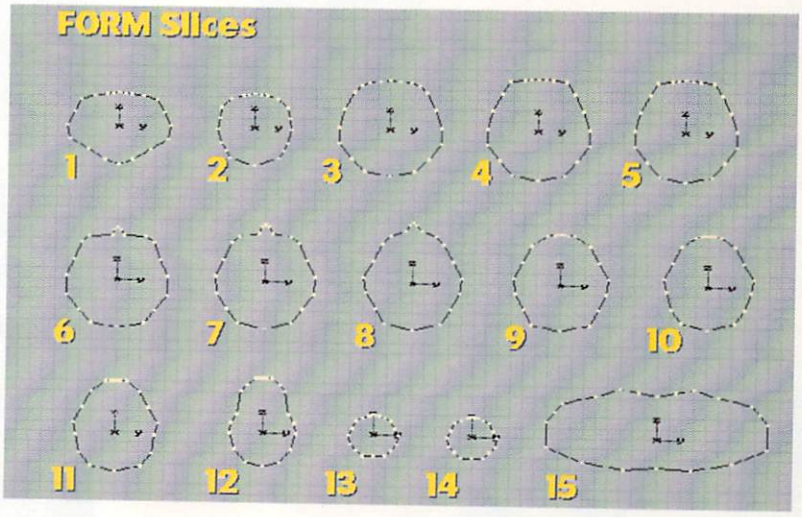
We will begin by creating two more key frames. Click on the +Key button at the bottom of the screen. In the front window, the rightmost dot will now be clearly marked as a key slice. You can create another key slice by clicking on a dot in the Front window. Click on the dot to the right of the leftmost one. The bar on top of the screen should now say: "Forms editor: Edit. Cross Section #14." Click on the +Key button again and select the leftmost dot this time. The bar on top of the screen will tell you that you are now working with cross section #15. We are now going to shape this slice into the shoulders of the head. Slice #14 was made into a key slice to keep the rest of the cylinder in its original shape while we work on the shoulders. This helps us avoid confusion.

Now make sure you are working with slice #15. In the Right window, start moving points so that you widen the slice to the right and left, and flatten the top and bottom. Since we chose to have symmetry round the Y-axis when we created the cylinder, the right and left sides will automatically be kept symmetrical.

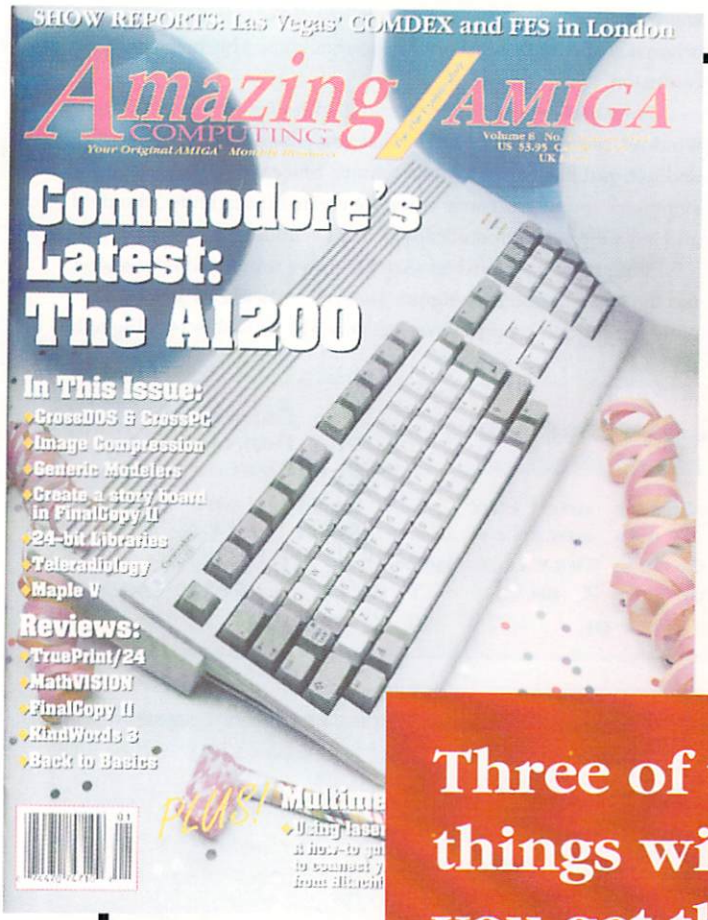
When you have pushed slice #15 into a rough shoulder-shape, use the +Key button to designate slices #13 and #12 as key slices. Now use the Select button to select slice #14. This slice is going to be

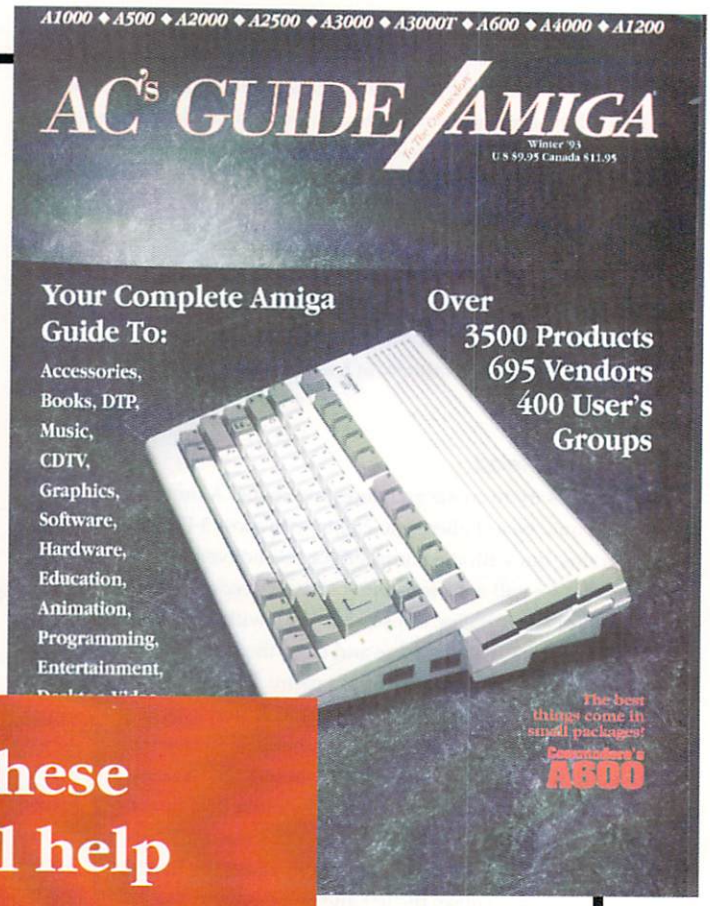




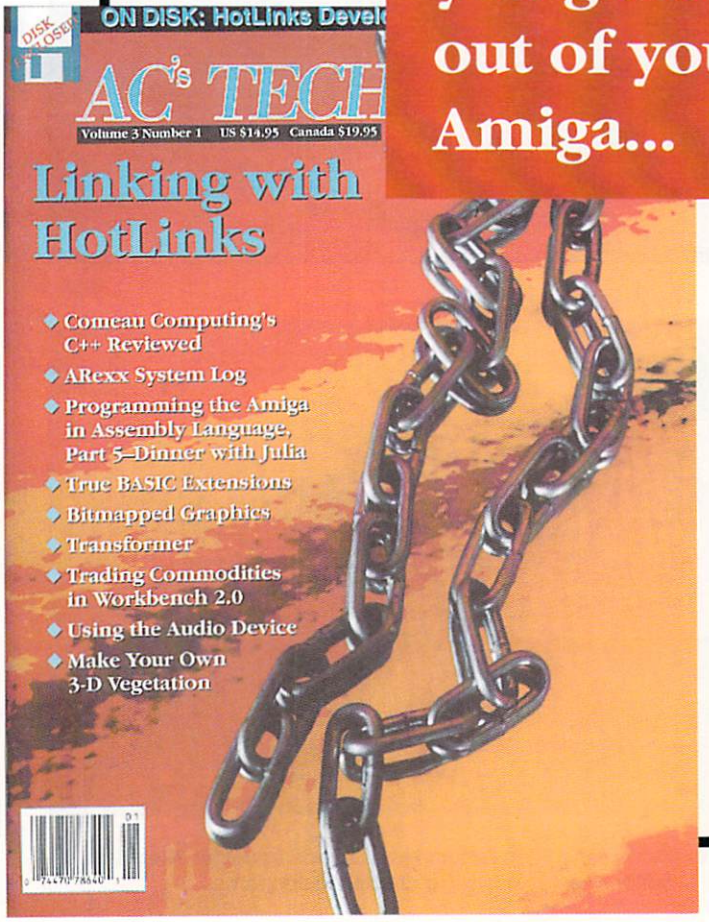


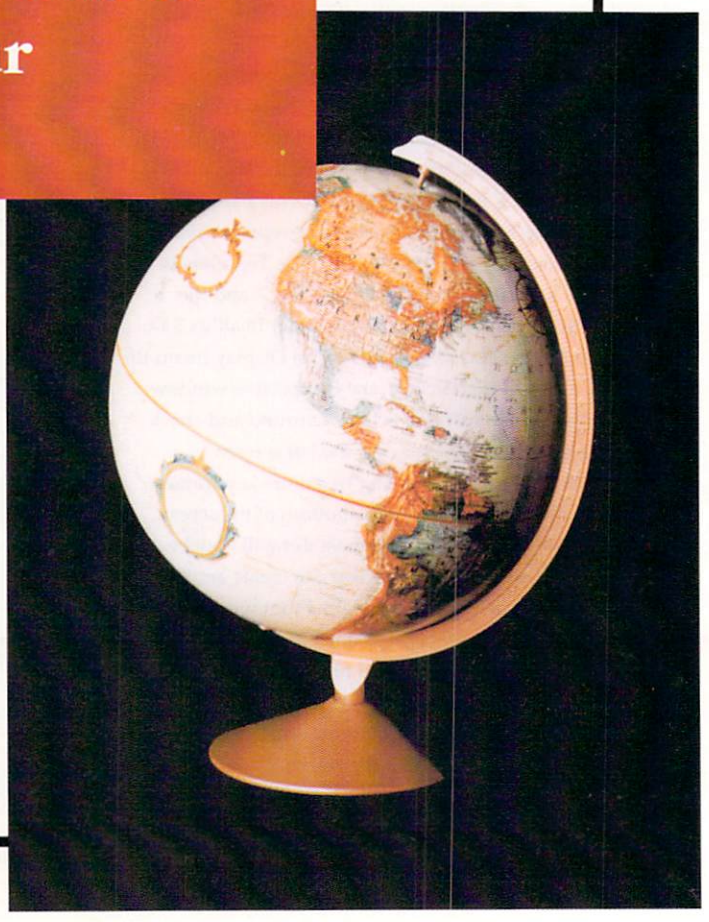
From top to bottom: The Form Editor's New Object requester. The Forms Editor. The slices used to create a head form.





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the base of the neck. Pull the dots in the slice closer together. Make a small circle. It doesn't have to be perfect; this is just a first project, remember. Keep an eye on the Perspective window as the neck takes shape. When you are satisfied with slice #14, select slice #13, then click the Copy button and the dot representing slice #14 in the Front window. This makes slice #13 a copy of slice #14. Since slice #13 is the top of the neck, you may wish to change it just a little, to accentuate the throat. Select slice #12 and shape it into the chin and the base of the skull.

By this time you should have got the basic idea. Sometimes, as you work your way up, particularly when you reach the slice just below the tip of the nose, you will have to change the distance between two slices. It's easy; just drag the dot representing the slice to the right or left in the Front window.

If you have to, you can add or delete slices with the Add and Delete buttons. The same buttons can also be used to add or delete points in a slice. Beware, though, that these buttons add and delete points in all slices simultaneously. If you delete a control point in one slice, you will lose a point in all the other slices too.

Finishing Touches

When you are satisfied with your basic head shape, save it, twice, under different names. After you have put the finishing touches on your object in the Detail editor, you won't be able to re-import it into the Forms editor, so it's important to keep a copy you never touch in any other editor. I suggest you use the suffixes .form and .obj to differentiate between the two objects.

Switch to the detail editor. If you want your head to look human, the easiest way is to borrow the attributes from the Beethoven head you got with your Imagine. Load Beethoven.new, select the face only ,and save the attributes as HumanSkin.attribute. Delete Beethoven, load the .obj head and give it the attributes from HumanSkin.attribute. Eyes, ears and mouth are not to difficult to make in the detail editor. Making hair is easy; just copy the head, then remove the face and neck from the copy so that you get a close fitting skull cap. Extrude it a little bit, change its attributes, put it in position on the head, and group the two objects together. Presto, you have created a head with hair. (If you are feeling lazy, you could steal Beethoven's mouth and hair.)

Once you have the basic shape, you can create many different kinds of heads, and with a bit of extra work, the bodies to go with them.

•AC•

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Instructional Programs in AmigaVision

by William Murphy

When Commodore International advertises the Amiga to the educational computing market, *AmigaVision* is highlighted as a key feature. Indeed authoring programs have significant potential for amateur programmers who require *ad hoc* applications which do not have commercial equivalents. Such programs can be developed by educators themselves in the manner that Hypercard stacks have been developed and distributed around academia. These "stacks" pertain to specific lessons or subjects in virtually any specialty. Thus the potential is there for educators and others to circulate their program ideas and to tailor instructional programs to their individual curricula. They can even put their more adept students to work on program details. In my case, I used my talented son to resolve programming problems and my daughter to do the artwork.

AmigaVision serves this need because of its capability for integrating a number of essential audiovisual operations with straightforward programming. When these features are combined with its looping, database, and external control capabilities, we have the ability to design full-featured instructional programs.

In preparation for an adult education conference, I designed two educational programs using AmigaVision. Unfortunately, all of the attendees were wedded to MS-DOS or Macintosh systems and the reception was negative. Of course, their major complaint was the lack of funding to support the high prices of appropriate equipment using those environments. Commodore may never be able to "educate" the educators to the value of the Amiga, but we can certainly put together worthwhile collections of AmigaVision applications for the benefit of those limited few who are aware of what the Amiga offers.

Anyone who has worked through even the simplest sort of pre-school educational program can sense the structure of presenting a problem or item, asking the child for a response, providing options to help if the child cannot respond, and providing praise for correct answers and encouragement for wrong answers. Also, scores can be kept and incremented for an overall "grade."

The items—questions, correct and incorrect answers, hints, and points awarded—should be entered as fields in an AmigaVision database. Then additional content can be incorporated by merely adding more records. If this loop which runs through each item is established as a subroutine, the program can be extended by adding additional call icons. If AmigaVision is unable to incorporate a desired action, the execute icon can call outside programs to carry out the operation and then return control to AmigaVision.

The features offered by AmigaVision are best supported by a development system comprised of supporting software and system features. *DeluxePaint*, a basic compiler, a DBase-compatible database program (for database changes), an audio-digitizer, and appropriate public domain software will contribute significantly to an AmigaVision application.

The first application follows the example of *Oxford's Picture Dictionary*, which is widely used in second-language instruction. It involves thematic pictures with numbered objects. The numbers refer the student to a vocabulary listed below. Thus a dog is indicated by a number and the number in the list below indicates the appropriate word. In this program the pictures are displayed on the screen (Figure 1).

When the student clicks on an object, the English and German words are displayed at the top, and the German word is spoken. The pictures were drawn in a DeluxePaint III interlaced, extra half-brite screen. Hit boxes were traced around each object using the object editor polygon feature. The hit boxes are activated under the mouse wait icon and the select button registers an index number. The number is equated with the key field for a database of vocabulary words. A subroutine is called to display the words and pronounce the German and English words. Then control is returned to the mouse wait for another selection by means of a hit box.

After the object is selected, a database record is retrieved according to the index number of the hit box. The record includes the German word, the English word, and the German and English phonemes, which will be sent to the narrator device. AmigaVision does not allow direct access to the narrator device and the translator library is not accurate for non-English pronunciation. This necessitates saving the phoneme to the RAM disk and then using the speak handler by executing the AmigaDOS Type command. Then this temporary file is erased (Figure 2).

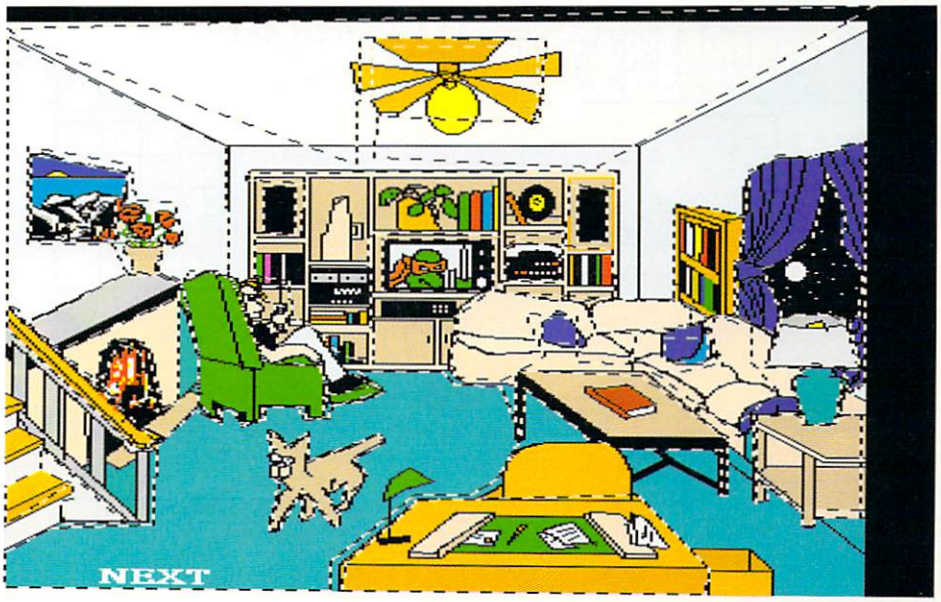
One of the nice features of AmigaVision is that it easily incorporates the products of other programs. The Amiga system has a standard graphics/music format known as IFF (Interchange File Format). One can prepare a picture, as was done in DeluxePaint for the program above, and then use that picture in AmigaVision. One can also create musical scores as well as digitized sound files which AmigaVision will load as needed. If one is neither musically nor artistically inclined, there is a number of public domain and commercially available collections of clip art, music, or fonts which can be perused for what might be useful.

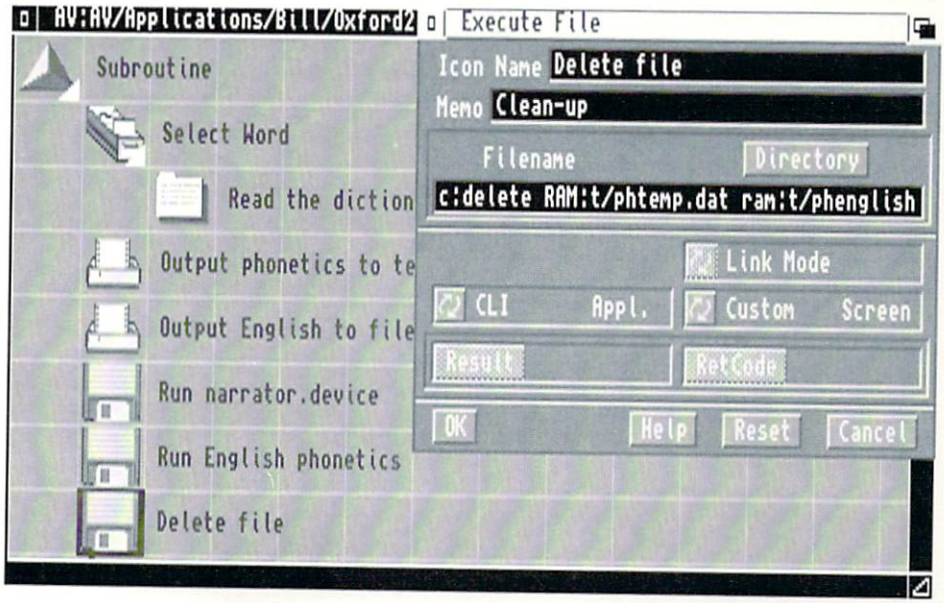
A second program further illustrates the advantages of placing instructional content into a database format and utilizing outside programs. This program sets up a sequence of math problems for GED instruction. AmigaVision includes the creation and editing of databases in DBase-compatible format. For instructional purposes, one may create a database of test items or problems and then display each record in sequence. Each record would have the following fields:

problem statement and question, five answer choices, the designator of the choice which is correct, a hint for finding the answer, and section subject keys to sort and select problems (Figure 3).

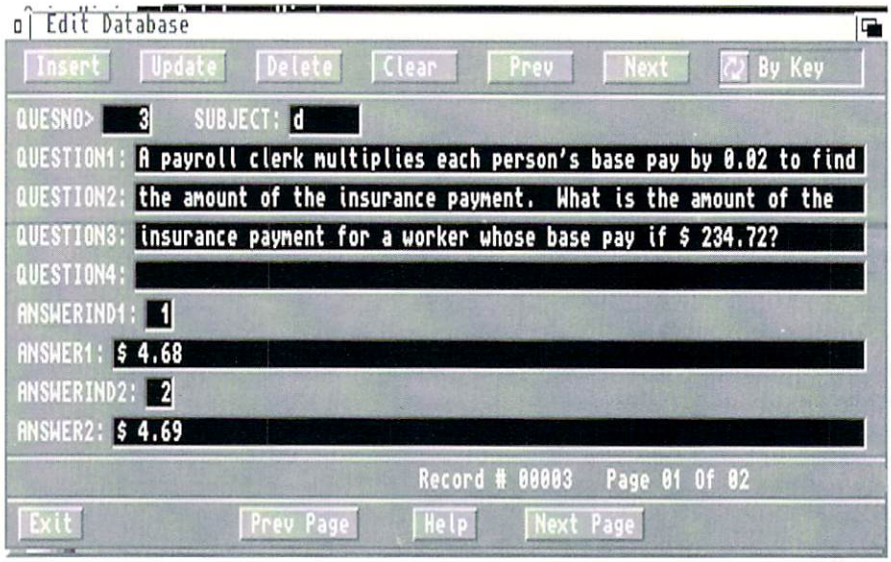
Placing the problems in a database permits easy modification and updating because the program does not have to be modified. The number correct is calculated and a score is provided at the end. Of course there are any number of commercial programs which operate in similar fashion. The advantage with an AmigaVision application is that the content can be tailored to a specific curriculum by allowing the teacher to select the questions and answers.

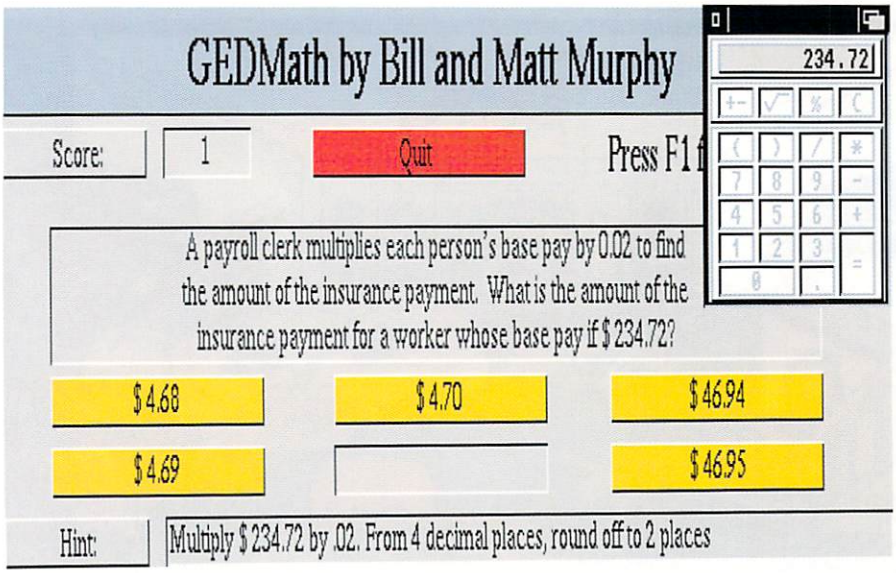
As an aid to the student, I wanted to include the screen calculator so that the arithmetic could be done on the screen. This could be done by executing the AmigaDOS calculator command. However, this calculator requires Workbench and automatically





Right: Figures 1 & 2.





Left: Figures 3 & 4.

puts the Workbench screen over that of the application, thus confusing the user. Upon searching through the Fred Fish catalog, I discovered a public domain shareware program on disk no. 497, which brings up a calculator on the front-most screen. The program author was David Cervone. When the student hits <F1>, the calculator pops up in the application (see Figure 4). The program and its handler must be available to the system.

These routines are tied together by loops within if-then-else branches. The endless loop is preferred because it repeats until a quit option is selected by the student. Quit is specified as a hit box at the top of the screen. Its selection sends a response to an if-then branch that ends the program. Otherwise control passes to an if-then-else branch which determines if a correct or incorrect response has been selected. A correct response triggers a digitized sample stating "that is correct" and adds one to the score. The incorrect response triggers the "that is incorrect." These samples were provided by Commodore on a separate disk offering called Amiga Clips: Sound Effects. A hit box labeled "hint" triggers an if-then-else branch, which displays the appropriate solution to the problem.

A number of improvements to these programs is possible. I have considered doing Spanish and French vocabulary and have blank fields in the database for those languages. Because AmigaVision does not allow modifications to a database, I copied the file to an IBM disk and made the changes in *FoxBase*.

I have also envisioned a program for teaching trigonometric concepts. This would use an AmigaBASIC program published in *AmigaBASIC Inside and Out* by Hannes Rgheimer and Christian Spanik, Abacus, 1989. Their program constructed pie chart slices based on data items. The appropriate routines could be adapted to instruction on sines and cosines and then compiled under HiSoft Basic (DMI Limited). The executable file would then be accessible through the Execute icon. Thus we could adapt a multitude of basic programs for use in AmigaVision.

These two examples are very limited with respect to the latest technology. The limitations of memory and storage in a 1MB/two-floppy-drive system do not allow for digitized pronunciation or involved graphics. Disk access speed is so slow as to discourage the user. It is desirable to have available a number of fonts, sound samples, clip art, etc. to insert into a program. Moreover, the greatest potential lies in applications which require systems with CD-ROM and hard drives. AmigaVision can be used to develop videotape and videodisc applications. Instead of drawing a scene, one can tape and digitize the scene. A series of scenes can be composed into an animated sequence. Even more significant is the ability of AmigaVision to access specified tracks on a videodisc. These scenes can be displayed on the same monitor as the program and called according to a "hit box" in the selection window.

Nevertheless, applications such as these place AmigaVision at the leading edge of technology but at a price considerably less than alternative systems. For those of us who remember working in TI-BASIC and Applesoft BASIC, the possibilities are truly inspiring.

•AC•

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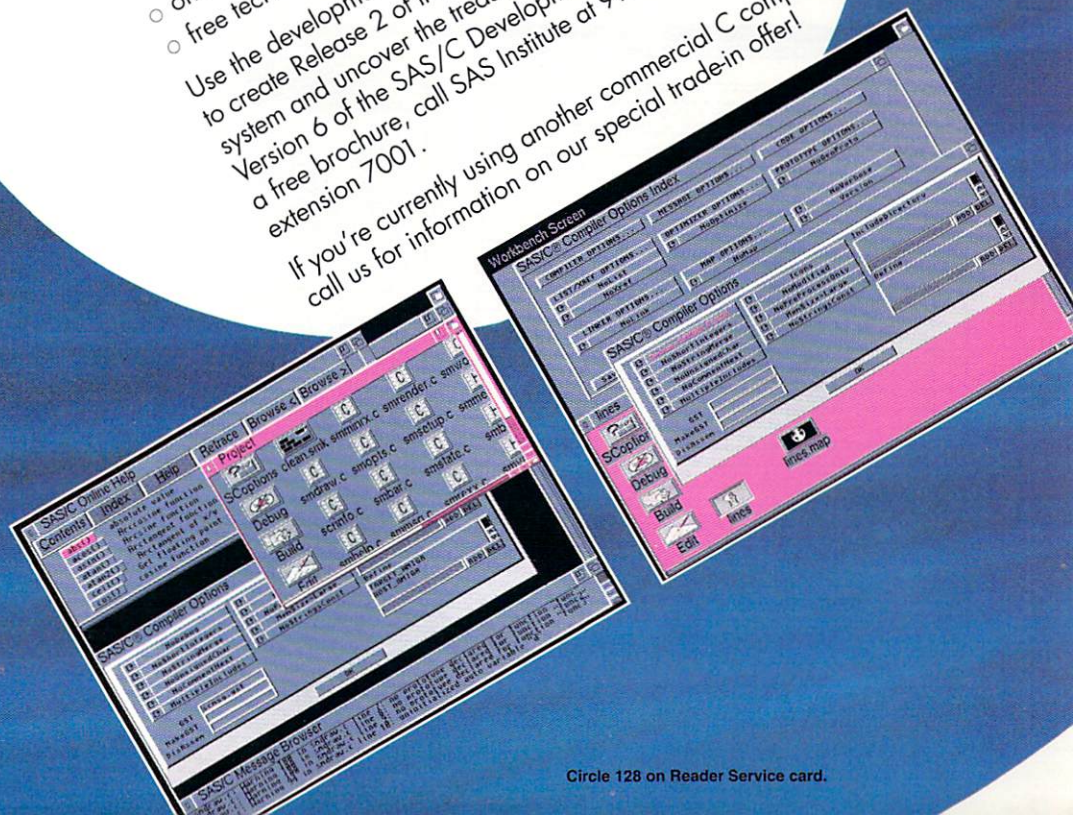
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Building Your Business Image

by Dan Weiss

Last month we explored the idea that the Amiga can be a powerful tool to meet a business's needs for various kinds of stationery. As a good first example we created a business card, and discussed what information is important when developing business stationery. In this article we will look at two more important pieces of business stationery, the commercial invoice and the Fax cover sheet. Again in this article all examples are done using PageStream, but other programs will work just as well.

To recap the last article, let me repeat the information that should be part of any document that leaves your business.

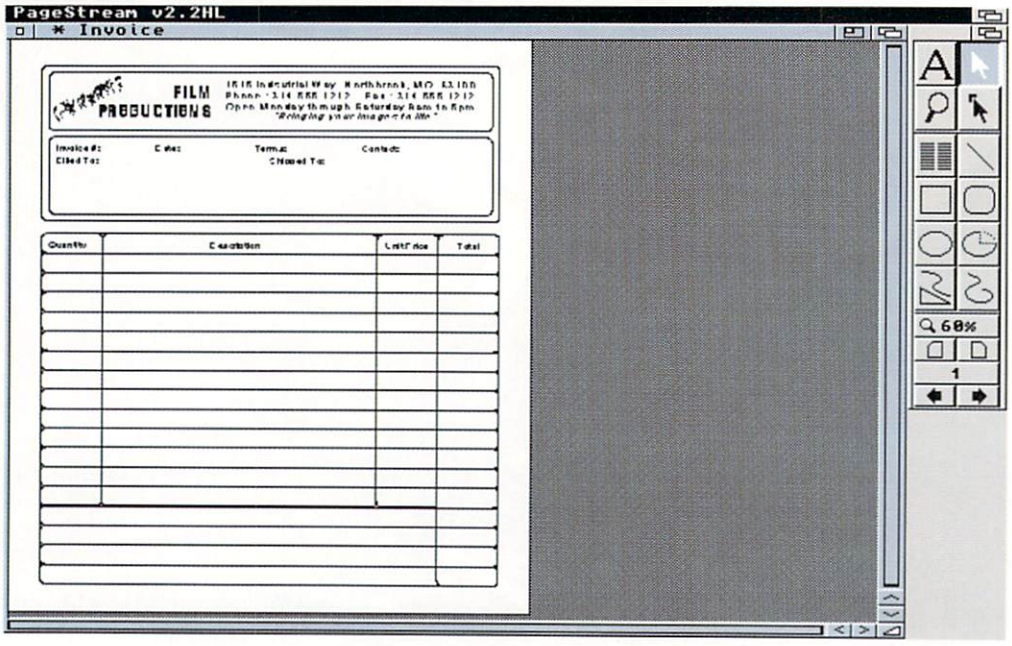
Name of the business
Address
Phone number
Fax number
Hours
Logo
Business statement
Person responsible for the document

This may seem a bit much for a simple invoice or fax, but it's not. There are probably many times you've gone through old papers only to find an invoice that has no indication of whom it was from. Or you have a fax, but have no idea of its origin. Remember all business correspondence serves the dual tasks of its main function and reminding the recipient of your business.

Project: Commercial Invoice

The invoice is one of the most powerful pieces of business stationery because it brings money to your company. The idea of an invoice is simple. It tells the customer what services were rendered or product purchased and for how much. The invoice is also a good way to double check that everything that was requested was done or received, or to let a customer know of special situations such as out-of-stock items.

How you lay out your invoice depends largely on what your company does. If you sell from a specific list of products, like an auto repair shop, then you will use a invoice much like what we will design. If you tend to handle items that are often backordered or out of stock, you may want to add columns to the invoice to show this. Creative companies, like video production houses, may deal less with specific items and more with package deals. In this case you may want to remove the quantity and unit price columns. But in all cases, the contact, shipping, and price information are the same.



Basic layout

First create a standard letter-size page (8.5"x11"). This may be a larger size invoice than you are used to, but it works well with most computer printers. Turn on grids (ie. Show Grids) and set the option to Snap to Grids. The grids should be set at .125" (1/8th of an inch) in each direction. It is always a good idea to use grids to give your projects a much more professional look.

Design your documents to be fashionable & functional

Next use the rounded rectangle or rectangle tool to create the box at the top of the invoice. This box will hold your company information as well as the customer information. Since this invoice is designed to be printed on virtually any printer, keep the box .5" from the edges. This allows for the fact that most printers cannot print on the full area of the paper. Start the box at .5" in from the top and the left, and stretch it to 3.5" from the top and 8" from the left. This makes a box 3" tall and 7.5" wide. Within the box create a second box that is inset .125" and is 1.125" tall and 7.25" wide. This is the area that will be used to show company information that will not change from invoice to invoice.

From the business card project last month, we copy the company logo. The space is a good match so all we have to do is place it on the left side of the box. For the business information create a text column that starts at 3.5" from the left edge of the page, and .75" from the top of the page, and extends to 7.75" from the left and 1.5" from the top. This box will be used to hold company information that does not change from invoice to invoice. The following should be entered in the text box as approximately 15-point type:

Company address
Phone number
Fax number
Hours
Business statement

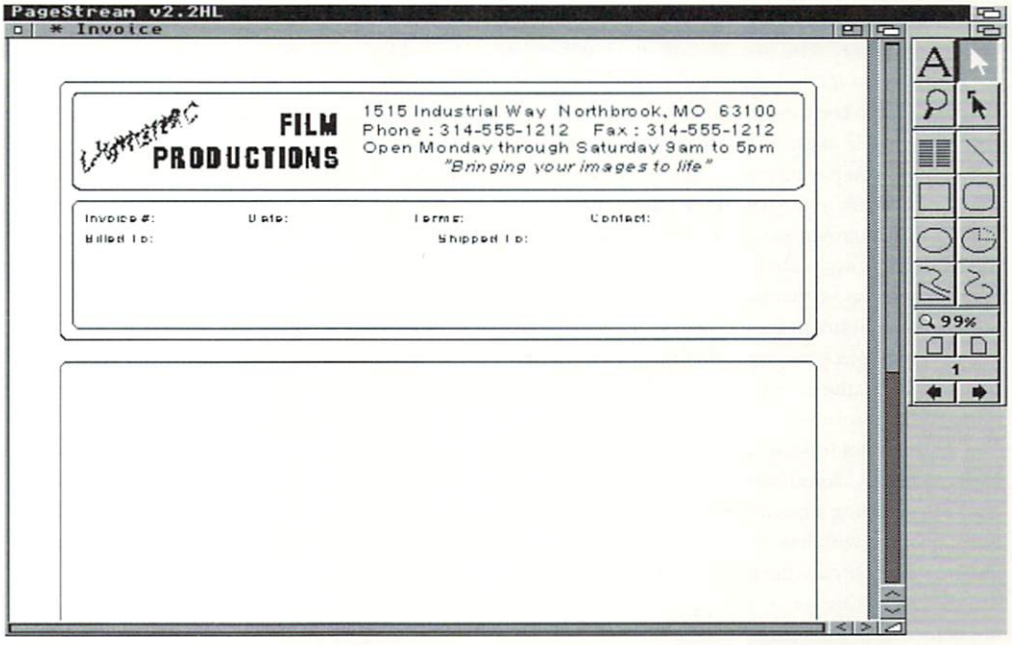
It works well if you place the address on one line, both phone numbers on another, and business statement and hours on separate lines.

Now create a second box within the top box. Like the box that holds company information, this box should be inset .125", but from the bottom left corner, not the top left. From the bottom corner draw a box 1.5" tall and 7.25" wide. With the grid this is simple matter as the drawing tool will snap to the right location if you are close enough. This box will be used to hold company information that does change from invoice to invoice, and customer information. Inside the box, along the top edge we need to place the following tags:

Invoice #:
Date:
Terms:
Contact:

For simplicity, make each tag a separate text object using 12-point type. Space the tags out evenly, making sure to leave space for the contact name after the "Contact:" tag. On the next line, using the grid as a guide, place tags for "Billed To:" and "Shipped To:". Place "Billed To" near the left edge and "Shipped To:" in about the middle horizontally.

Now that the header is done, next comes the body. Draw a box with the rounded rectangle tool from .5" from the left and 3.75" from the top to 8" from the left and 10.5" from the bottom. This builds the frame of the body of the invoice. Next draw a rounded rectangle from the top left corner of the body rectangle, the same width as the body rectangle and .375" (3/8ths of an inch) down from the top of



the rectangle. This is the main bar of the invoice. Duplicate it 17 times with no horizontal offset and .375" vertical offset. All the bars should neatly fit inside the body rectangle. To create the columns of the invoice, draw a rounded rectangle from the top left corner of the body rounded rectangle, one-inch wide and down to the bottom of the 14th bar. Starting at the right edge of the first column, draw a second column rectangle that is just as tall, and 4.75" wide. Next create another one-inch column to the right of the second column, that is the same height. Finally in the last inch of the body box, create a column that is one-inch wide and the full height of the body rectangle.

Using the text tool, Label the first column "Quantity" in 12-point type. The second column should be labeled "Description." The third column is "Unit Price," and the fourth is "Total." By now you may be wondering why only the Total column runs the full height of the body. This is so because the last four lines are used for added costs and totals. Select the last row of the body, being careful not to select the body itself, and slide its left side so that it lines up with the left side of the "Unit Price" column. Again, this is really easy to do if you have the Snap to Grid feature turned on. Now change the width of the next three lines in the same way. In the first of the shrunken rows, place the tag "Sub-total" in 12-point type. In the following rows place the tags "Shipping," "Tax," and "Total." Align all the tags so that their right edge is against the left edge of the "Total" column. In the gap that is created at the bottom of the body you can place messages that remain constant or change from time to time. In the example we simply put "Thank you for your business" in the same style as the company logo.

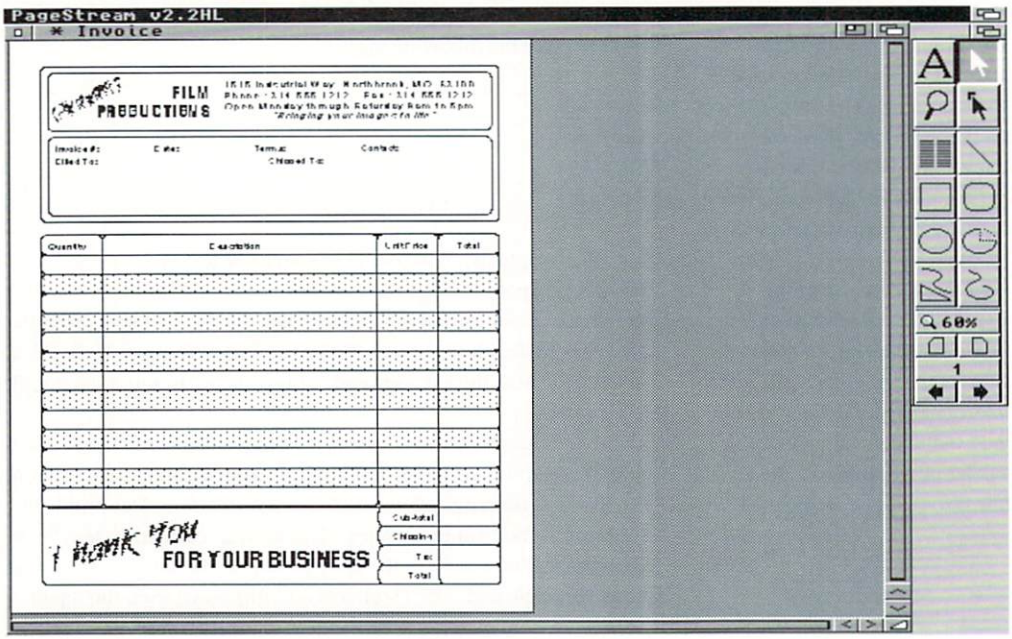
Last but not least, let's add some gray bars to make the invoice easier to read. Colored bars can make many documents easier to read by providing a guide for the eye to follow horizontally. But when printing with low-resolution printers, the dots that make up the gray may obscure the text. If you are using a 9-pin dot-matrix printer or a printer set on a low-print resolution, you probably will not want to add gray bars.

To add the gray bars, select the 2nd, 4th, 6th, 8th, 10th, and 12th rows and set their fill style to black 10%. This will give you a light gray that most type can be seen with. Be sure to then send the rows to back of the document so that the columns will be visible.

Using the Invoice

Now that you have created the invoice, how do you use it? The first and simplest way is to print one really nice copy, and photo-copy a stack of them. This can be very effective and may be all you need. A one-step improvement on this is to make pseudo three-part forms. Print one invoice, then make copies on white, yellow, and pink paper. With dot matrix printers, you can purchase ready-made multi-part paper.

The next step is using the computer to do more of the work. By using page number commands and date insertion you can get the computer to print you a fresh invoice as you need it already dated and numbered.



Finally you can use your desktop publishing program to completely create your invoices. To do this, copy the entire invoice that you have just laid out to the Master Page. This means that the invoice form will show up on every page without actually being part of the page's layout. When you go to a new page, create columns and text items as needed over the invoice form. Using the grid, you will find it very easy to keep everything lined up. This method has the added benefit that you can review all invoices in one program.

Project: Fax Cover Sheet

The other project we will do is not as complex; it is a fax cover sheet. More and more in today's business world facsimile or fax has become a primary method of communications. You can send almost anything via facsimile. The down side to faxing is that your fax usually goes into a bin and may well be mixed in with someone else's fax unless you distinguish it. The best way to mark your fax is a good cover sheet. A cover sheet will help to identify your transmission and can be used to convey information pertinent to the transmission.

Big and Bold

The most important thing to remember about a fax is that it degrades the quality of the document you are sending. If your source document uses small type and is hard to read before you send it, it will be unreadable at the other end. Every thing should be big and heavy, so that fax won't "lose" it. Also, since faxes sometimes go through the machine at odd angles it is best to avoid the extreme edges of the document.

Creating the Fax Cover Page

In addition to the information that we have been putting on business cards and invoices we need to allow space for:

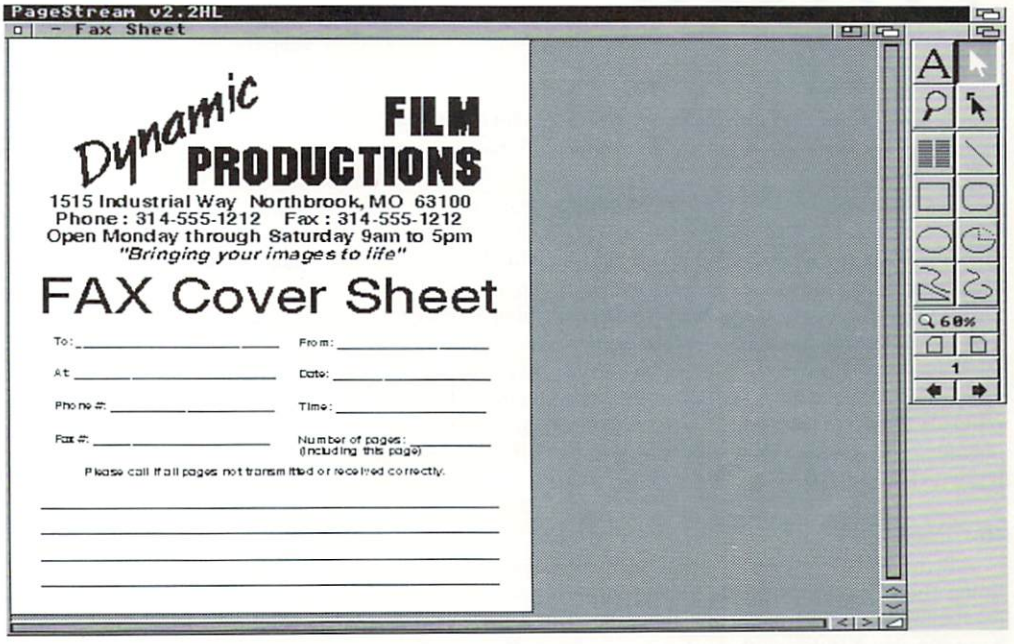
Recipient
Recipient's company
Recipient's phone and fax number
Date and time of fax
Number of pages

If the recipient is in a large company, it is often wise to indicate what department the person is in.

Creating a Fax Form

Start with an 8.5" x 11" document. This project can also be done with an 8.5" x 14" document (legal size). The advantage to a legal size document is that if all you are sending is a one-page note, you can fit more on a legal page. Sending one page as opposed to two can be a big savings since many places charge steep fees for each page sent or received.

First show the grid and set it for .25". Next copy the logo from the invoice. Proportionally paste the log at the top of the page by clicking and dragging the paste cursor while holding the shift key. Size the logo so that it covers the top of the page leaving .5" on the left, right and top. Next copy the column of text from the invoice that contains the company address and phone numbers. Size the column so that it is as wide as the document with .5" on the left and right. Place it below the logo and make it approximately 1.5" tall. Select the text and set it to 24-point bold type. The bold type helps the text come through the faxing cleanly.



Next create a line of text 70 points in size that reads "Fax Cover Sheet." Place this under the address text and center it. Now create a block of text at 15 points that has the following tags separated by two blank lines:

To: _____
At: _____
Phone #: _____
Fax #: _____

Then a block of text with:

From: _____
Date: _____
Time: _____
Number of pages: __
(including this page)

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Doing Business

With these two documents we have again shown that the Amiga is an excellent tool for meeting the needs of a business. In the future we will look at other applications of Amiga desktop publishing for business. If you have any questions, or have found ways that the Amiga meets your publishing needs, let us know.

•AC•

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Crayon Titles

by Patrik Beck

Creating trendy titles on an Amiga is so easy that it can easily be done by a novice on a low-memory, unenhanced machine using only *Deluxe Paint*.

A certain style of video titling became popular a few years ago. The first show to use it on a regular basis was the "Tracy Ullman Show." The show's name and all the credits looked as if they had been hand drawn rather haphazardly with a crayon, with little regard to consistency or boundaries. This eye-catching, low-tech look went on to become commonplace on both network and local television. Always on the lookout for new weapons to put into my video graphics arsenal, I realized that this style would lend itself particularly well to the Amiga. Upon experimenting, I found that not only can the Amiga reproduce this kind of effect extremely well, it can do it using any Amiga that can run Deluxe Paint III or IV.

The Goal

By now, everyone who watches television has seen this type of titling. Brightly colored text jumps jarringly over the screen, selling everything from tennis shoes to hamburgers. This type of ad is normally aimed at the youth market, but is just as effective when stressing a message to anyone, regardless of age.

The effect is achieved through a combination of freehand drawing and animation. Even if you have never drawn a recognizable object in your life, if you can write your name legibly with a crayon three times in a row you should be able to accomplish this project.

The First Step: Setting up your Screen

The first thing you need to do is to start up Deluxe Paint, version III or IV will work fine. If you are short on memory, choose a standard sized interlace screen with either four or eight colors. I know that you normally want to have a hi-res overscan screen when doing titles, but you will see that in this case it is not necessarily the best way to go.

Once your screen comes up, it is time to adjust your palette. For the purposes of this tutorial, adjust the first color register, color zero, to a neutral light grey. For the remaining color register of the palette, give yourself a spread of bright, gaudy colors.

Be sure to stay within the legal boundries of video when adjusting your colors. The easiest way to assure this is to set no slider to greater than 75% of its maximum.

Step Two: Adding your Text

Before we start with the actual animation and graphics, we need to set up a guide to use as a reference. Choose the text you want to use and write it on the screen using the dotted freehand tool. This will not be seen on the final product and is only used to keep the "jumpiness" within reason. (Figure 1)

When you are satisfied with placement and spacing of your text, you will want to create the frames for animation. By having the text on the screen when you set the number of frames, you automatically copy that screen to all the newly created frames, as does the "add frames" function. You will need a minimum of three frames for the effect to work properly, but four works best.

Step Three: Brushing Up

You should now have the same crudely scrawled text on four identical frames. To achieve the look we want for the letters, we will use a single-pixel brush and the airbrush tool. What we will do is "spraypaint" over the original text. (Figure 2)

It will probably be necessary to adjust the "nozzle" of the airbrush to give us the amount of spray area we desire. This is done by clicking on the airbrush box with the right mouse button. A circular area around the mouse appears that represents the effective spray area, and can be made larger or smaller by holding down the right mouse button and moving the mouse.

When you have successfully airbrushed over all the text on the first frame, repeat the procedure on the following frames. You can advance the frames one at a time by hitting the "2" key. If you want to check the previous screen you can back up by hitting the "1" key. If you sprayed where you should not have, you can click on the "undo" box, but I find it more convenient to simply hit the "u" key on the keyboard. I recommend that you use a small amount of text to begin with because this can get rather tedious.

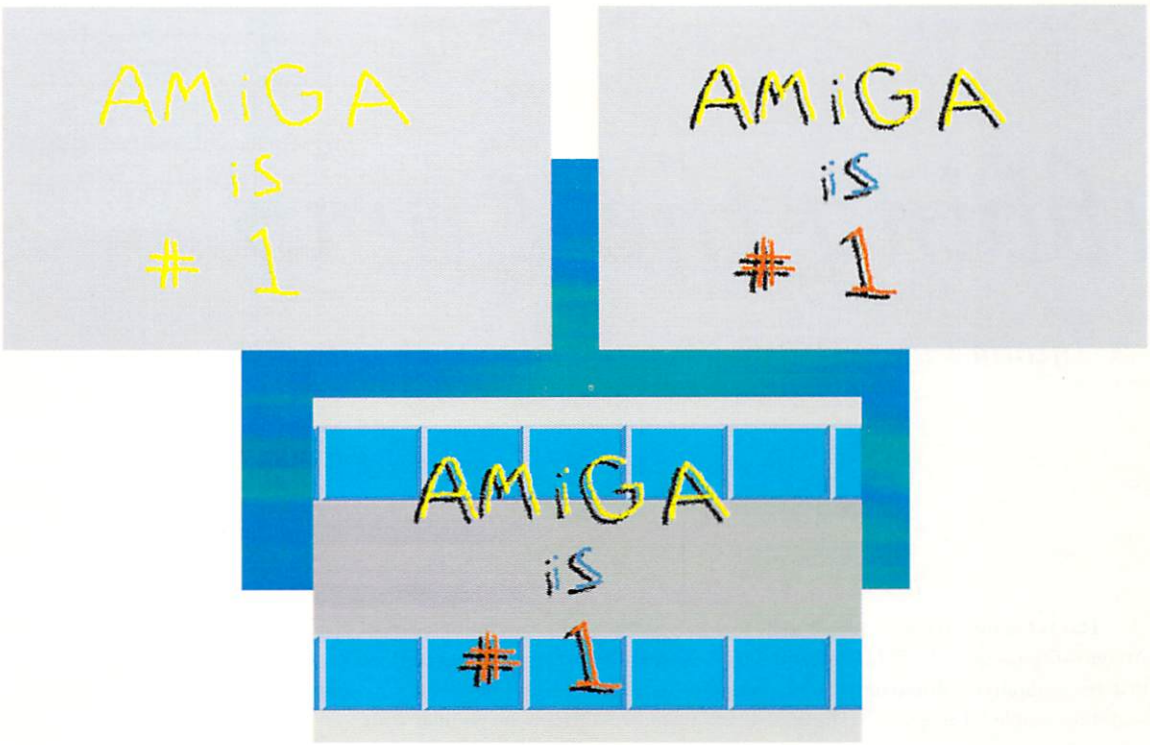
Step Four: Let'er Fly!

Once you have airbrushed over all the text of all the frames, you can see your finished results by running the animation. Hitting the "4" key will run the frames in a continuous loop and the "6" key will cause it to ping-pong; you can judge which is more appropriate for you. You can adjust the speed of the animation while it is running with the right and left arrows. The left arrow slows down the animation while the right arrow makes it run faster. I have found that useful speeds can be anywhere from three to 10 frames per second, depending on the graphics and the desired effect.

After seeing it run, you will probably see points that go a little too far and will need some adjusting. The "wildness" of the animation depends on how much consistency there is from frame to frame.

But Wait, There's More!

Now that you have a grasp on the basic concept of the technique, which is really quite simple, let's expand on it. If you are



relatively new to DPaint, follow along with some of these more advanced techniques; you don't have to understand them to use them.

To do really serious damage in DPaint, you need to use animbrushes. Because you are operating on a lo-res, non-overscan screen with a reduced number of colors, you will be able to pick up a much larger animbrush than usual. Go to the first frame of the animation and note or add something unique to that frame so you will be able to identify it easily. Now pick up the whole thing as an animbrush. Let's start with a clean slate. Clear all the frames of your animation. It will work best if you keep the same number of animation frames as frames of your animbrush (four).

Spastic Shadows

Of course, you simply cannot have titles without drop shadows. Select a dark color from the palette and activate the "color" mode by hitting the "F2" key. This temporarily turns your animbrush into a darker color of the original. Making sure that your animbrush is on the first of the four images, stamp it down slightly lower and to the side of where it should be.

The next step is to place it properly on the preceding frames. The best way to do this is with the move command. A capital "M" brings down the move requester. It is not necessary to add any coordinates, but do make sure that the frame count is the same as the actual number of frames. Hit draw to place the shadow in exactly the right place on each frame.

Once the shadows are drawn, hit "F1" to return the original color of the brush. Be sure that the current image of the animbrush is the one that corresponds to the existing shadow. Place the animbrush slightly higher and to the side of previously placed shadow, and stamp it down. Repeat the process with the move requester; you should only need to hit "draw," but it does not hurt to check things with the preview function.

Your titles should now have a fairly realistic looking drop shadow associated with them that follows every jerky movement. This gives your animation an apparent depth. The angle and the distance of the shadow from the titles give visual cues as to the position of the apparent light source, and also its distance from the background. (Figure 3)

To get a "Late Night Movies" type look, pick up the animated titles and their shadows as an animbrush. Now create a background animation that consist of squares moving from one side of the screen to the other. The number of frames of the animation should be some multiple of the number of frames of the animbrush (16, 40, 60, etc.) The reason to use squares is that they do not care what resolution you are in; they are always square. When you have the background of the objects moving across the screen, you can place your animated brush over them, complete with its own drop shadow.

More and More Possibilities

As with any new technique, it does take some practice and experience. Fortunately it has a very mild learning curve, and you will soon find out what works and what does not. By now you are likely to have some ideas of your own. Changing colors for each word or letter is a nice effect. Color cycling can also be used to make a simple four-frame animation seem much more complex. It can also be used in conjunction with more traditional type, such as having the name of a special event at the top of the screen cycling and jumping while below its dates and location are presented in more legible fonts.

I have found this to be a valuable addition to my bag of tricks. Not only is it possible to reproduce a style currently in vogue with the media, I can do it quickly with very little memory. A four-frame, lo-res, four-color animation makes for a very small file that is quickly loaded and saved. It just goes to show you, you do not need a monster machine to do quality video; you just need an Amiga.

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Rubbing the Lamp

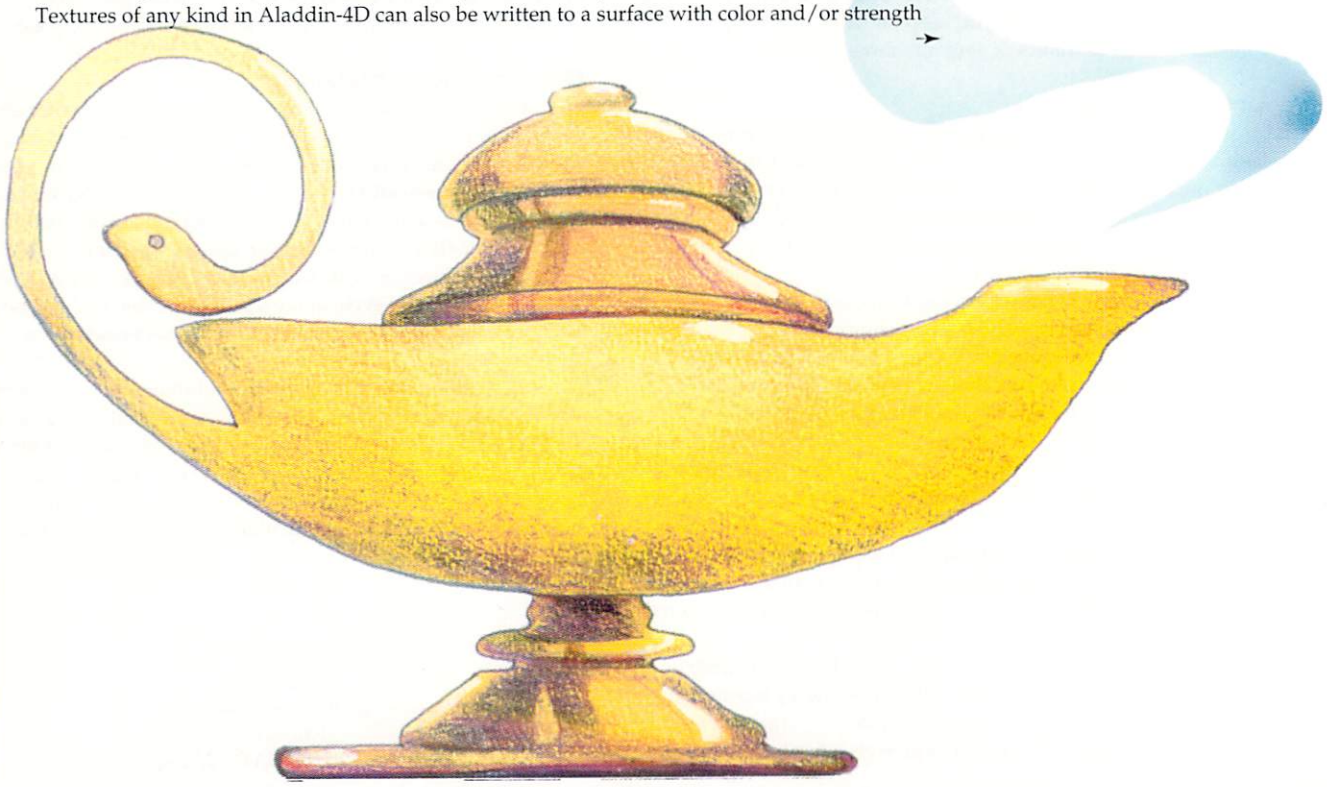
A Tutorials on ADSPEC Programming's Aladdin-4D

by R. Shamms Mortier

This is the first in a series of tutorials that will gently guide you through a most magical Amiga 4-D package, ADSPEC Programming's *Aladdin-4D*. I will focus upon the tools in Aladdin that are qualitatively different from its competitors, and spend less time on such matters as sculpting simple 3-D objects that have tools most Amiga 3-D users are familiar with.

Procedural Textures

We're going to begin with a dedicated look at Aladdin-4D's Procedural Textures option. "Procedural Textures" are also sometimes called "Algorithmic Textures," as they are created mathematically within the software. This means that they take up little space on a disk as compared to BitMapped Textures. Since an algorithm is a mathematical formula that has input variables; changing the variables alters the look of the result. Aladdin-4D has 25 basic algorithms for creating basic Procedural Textures—with more on the way on newsletter disks and in upgrades—and from this small number an infinite variety of forms can be produced. Since colors can also be altered in these textures, and either subtly blended or sharply defined, the number of possibilities increases further. Oh, yes, and color palettes can also change over time! Textures of any kind in Aladdin-4D can also be written to a surface with color and/or strength →



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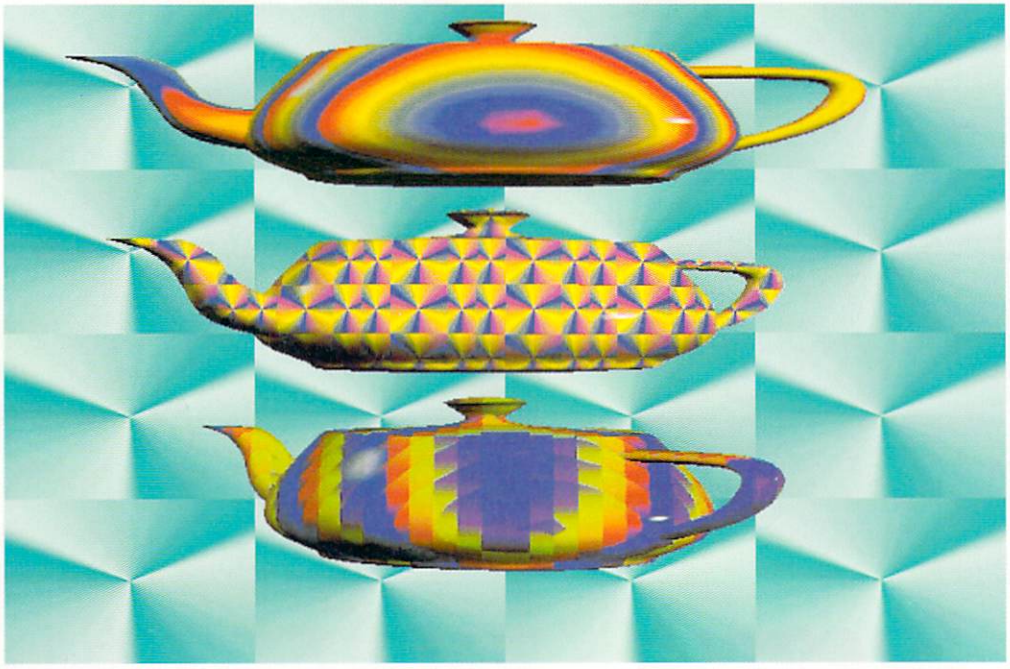
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set at from 0% to 100% over time, so that they can fade in and/or out on a surface (Color/Strength sliders in Figure 4).

In order for a surface to take on a Procedural Texture as a bumpmap, it must be Phong shaded. Aladdin-4D allows you to shade with Goraud value/color and Phong. Phong is what we've come to expect in an Amiga 3-D visual most of the time, as it gives us maximized smoothing of polygonal surfaces. Aladdin-4D also allows you to toggle "adjacents" on or off. You'll want to keep this assignment on for curved surfaces, but off for planar and rectangular objects, as it blends the shading across edges. Goraud shading and effects are something we'll leave to another tutorial for the moment.

To work with Aladdin-4D in assigning textures and attributes to objects, you have to understand the way it works via "lists." Lists allow you to save, load, and delete whole parameters of effects. Let's walk through a simple list assignment as it applies to targeting Procedural Textures. Obviously, you'll have to either create or import a target object first. Once this is done, the object is "selected" by clicking on it with the left mouse button. By holding down the shift key, you can target as many objects as you have on screen, and apply the same texture to all. Note, however, that if the texture is applied as a "projection," it will be larger then if applied singly to each object. The first list brought up is the "TXList" (#1 in Figure 4). This is accessed by selecting Polygon/Textures from the upper menu bar. "TXList" is where you add, clone, delete, and clean up basic texture lists. Cloning is nice because it allows you to add clones of a list for other objects that can later be manipulated differently when animated, a good tool to add variety to parts of natural elements like water and clouds.



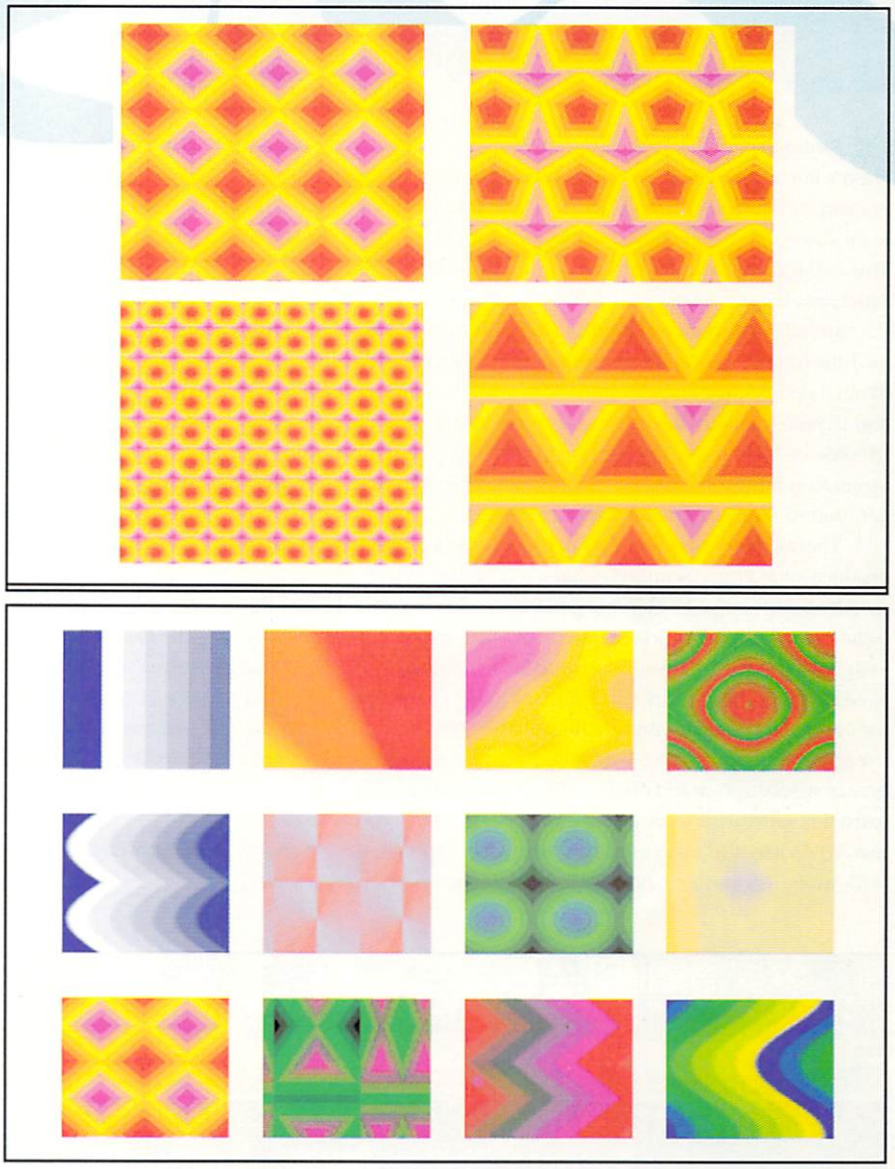
Selecting "Control" then brings up the TXList Control menu (#2 in Figure 4). Here you can input a specific name for your list and load and/or save lists. This is also where you tell the animation if you want it to be Cyclic—repeating from the first frame to the last—or periodic—repeating by going from first to last and back again, or "ping-pong." You also set the number of times you want it to cycle or periodically animate. Selecting "Member Control" brings up the actual Texture Control menu (#3 in Figure 4).

Texture Control Menu

This is where the heart of the interactive creative action lies. At the top of this requester (as in Figure 4) are sliders that allow you to target specific animation frames for the effect. Below that are buttons for X/Y flipping of the texture, Type (Cyclic or Periodic), Antialiasing, and Filtering. The Color/Strength sliders are next, with separate input areas for entry and exit values. Next are the controls for the way that the texture is to be written to the object. They include Type (Normal, Reflection, GenLock On, Bump, Opacity, Hardness, and Illumination), Map (Projection, Cylinder Map, Spherical Map, and Free Angle), and Axis (X, Y, Z). For all of the examples shown in our figures, a Normal Projection on the Y-axis was used. Another tutorial will demonstrate the visual results of using other combinations. Below this are the controls for bringing up the path requesters and selecting Procedural and/or Bitmap textures, and the "Proc Color" menu (#4 in Figure 4). To the right is a series of input areas that allow you to change various parameters for each Procedural (and also for BitMap) texture. These vary in amount according to the chosen texture. The Procedural Texture "Helix," for instance, has Burst, Twist, and Distance parameters, while "Polygonal Tiles" has many more—Width, Height, Number of Sides, Range Scale, Clamp, Frame, Color, Blend Distance, Even and Odd Offset. Only by playing with these settings and rendering the results can you achieve a more intuitive knowledge concerning expected outcomes, though Figure 2 should alert you to some of the possibilities.

Color Definitions

Let's spend a moment investigating the Procedural "Color Definitions" area (#4 in Figure 4). At the top is an area that allows you to input the number of colors, of which the maximum is eight. Each color in both the Entry and Exit palette can have its blend set with its adjacent neighbor (L&R Blend areas). I usually use 0.5 as this introduces a nice, smooth transition between colors. The "Bell" toggle produces "rounder" blends when on, and is especially noticeable in bumpmaps. "Tuck," when on, prevents blending of the first palette color with the last one. The Entry/Exit palettes allow you to alter the palette over time, and is best used periodically so that there are no sudden color shifts in the animation. The spacing bars allow you to adjust the amount of separate colors in the palette, even allowing for blank spaces—as long as the "Compensate" control below is toggled off—where the Procedural will not map but allow the texture or surface underneath to show through—a useful feature for animating moving bands of color clouds over a planet! The Start/End sliders also affect the spacing of the colors. Below this are all of the palette controls for each color Amiga artist/animators have become familiar with in all Amiga paint packages.



Conclusions

Procedural textures cannot be used to solve all of your texture needs. There are times when a quality bitmap is called for, as might be the case when you need a realistic stone or wood surface or a detailed label. Metallic looks, however, can be easily simulated with Procedurals, as can striated marble finishes. Any surface that requires a pattern—tablecloths, bricks, tiles, as well as unique looks—can be simulated with Procedurals. Unlike other Amiga packages, Aladdin-4D offers you an infinite amount of these textural possibilities in the software. Purchase of a separate product is not necessary. ADSPEC also offers many textures and other niceties in its quarterly newsletter, and new Procedurals may be introduced this way as well. The other thing to remember about Aladdin-4D is that you are not limited to one texture on an object. The same surface can have a bumpmap, Procedural, and bitmap textures, as many as is needed to create your Amiga 3-D dream world.

The next tutorial in this series will center upon the Aladdin-4D Attribute list and how to use it.

•AC•

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Playmation

R. Shamms Mortier

Playmation is the long awaited newborn daughter of Martin Hash's line of animation products, and her lineage is apparent. From *Animation:Apprentice* through *Animation: Journeyman*, her features remain discernible. Playmation is the grandaughter become princess. This is the same modular program as was the *Animation:Journeyman* series, but there is an upgrade in the quality and speed, starting with the manual. The previous manuals were slipshod affairs at best, with too little tutorial information encased in an unreadable type style. This manual is very clear and concise, and is printed in nice, readable type and is professionally designed. Anjon Associates, the Canadian distributor of the Playmation product line, had a lot to do with the upgrading of the manual. Playmation takes a good amount of study to get used to, so a good manual is a necessity.

There are five modules that are traversed in succession in order to produce animations: Scupture, Character, Action, Direction, and Render. In Sculpture, 3-D object segments are built. In Character, the segments are connected in a hierarchy of relationship and are possibly assigned material textures. Relative skeletal motions are designed and saved in the Action module. In Direction, the choreography is created for various movements, and Render finalizes the process by creating the actual animation frame-by-frame. Each of the modules has its own area of specialization and dedicated tools and options. The best way to learn this software is to make it the only Amiga 3-D/4-D package you use. To do less is to assure that you won't have enough time to create with, much less master it. Let's walk through the modules one at a time.

Sculpture

You can view the Sculpture controls and gadgets in the middle-third of Figure 1. As you can appreciate, there are action icons here not familiar to the non-Hashed Amiga animator. This is so because there are processes here not normally found in other software, and also because Playmation works by means of curved surfaces and paths known as "splines." Playmation actually renders splines directly, very different from other animation packages that deal in polygonal surfaces. Because of this, smooth organic structures and movements can be more easily created and animated. The Sculpture screen is divided in two. Either half is where your design can take shape, though the right side is reserved as a 3-D viewport; each half-screen can be set to any view, including rotated perspectives. At any time in the design process, you can apply a rough-shaded covering to the left wireframe, getting some idea of the finished 3-D shape. Everything works very fast here, though turbo Amigas (68030s or more) are vital in using this software. The feeling in this module is very intuitive, and everthing works in a virtual reality space that is real-time mouse interactive. The splined objects respond masterfully to adjustments of their smoothly curved surfaces. Organic features such as hands, arms, legs, and other body parts are a snap to create, and the curves give them an aesthetic appeal missing in squarely designed polygonal surfaces.

Character

You don't really see the shape of an object here initially. It's bounded by a box set on a 3-D axis for reference, but if you must see the shape, then a Display/Curved Branch command toggles the chosen shape to the screen. Making selected elements "parents" of others is a fairly straightforward process. Just choose it and select the "parent" icon—which is designed as a parent and child. When parents move, all associated children move in relation to them. Child elements can be parents of children lower in the hierarchy. Segments can be scaled, rotated, and moved anywhere on the screen by numeric adjustments in all XYZ directions.

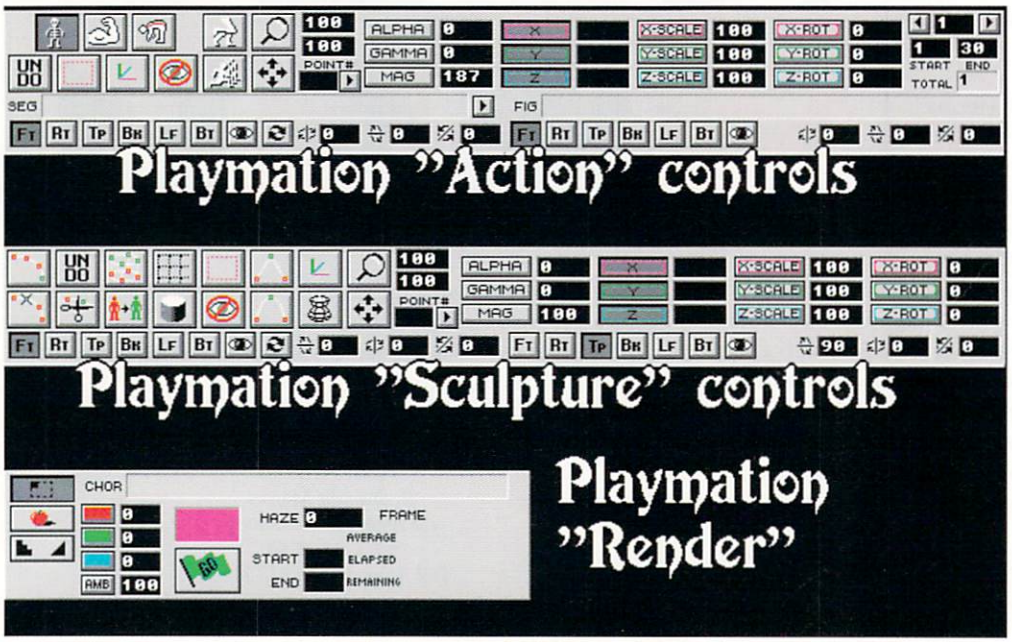


Figure 1. The Playmation Action, Sculpture, and Render controls.

A look at Will Vinton's 3-D animation package

Segments can also be ghosted, meaning they won't appear in animations if not needed, but will still be in the character's world when and if called upon in other animations. A separate "Attributes" menu on the right side of the screen allows you to place algorithmic and IFF textures on your selected element, and also to target the degree of ambient light, transparency, roughness, specularity, mirror effect, and refraction. The algorithmic effects are very interesting in that you can mimic a host of surface textures with little memory used up (wood, marble, clouds, etc.); waves and bump maps are also supported.

Action

This module is for the development of movement archetypes that serve as the skeletons upon which hiearchal-designed 3-D elements are placed. You could, for instance, develop a whole series of walking-running motions here, and later use them to make your character do any of them in succession. Like *LightWave*, this module uses keyframe settings to develop movements over time. Like the Sculpture screen, the Action module has two windows. The one on the right is devoted to the skelton of the movement. Skeletal motions include joint movements such as rotations, translations, and scaling factors. All figures in the same "class" can use the same skeletal motions, making the development of motion libraries in Playmation a highly-recommended process. A unique feature of this module is its ability to morph motions, to add that bit of realistic distortion to organic movements. This is done through two processes: muscles and spines. Muscles allow skin to bulge in accordance with specific actions. Spine motion gives animated figures a rubbery look—the manual mentions Gumby as an example. This module adds the quirky realism that organic objects need in order to be perceived as "real."

Direction

"The world is a stage" and so is Playmation's Direction module. All of the characters and their motions and morphs, muscles and splines are given direction and lighted paths in their world here. You can create a grid of any dimension and set your actors in motion. The view can be perspective or set to any of the six view points (top, bottom, left, right, front, back). Like all other drawing in Playmation, paths are also splines, so creating them is based upon your experience in the rest of the package. Again, as in LightWave, camera position, targets, and lights play a vital role in the final "filmed" action. Characters are assigned to paths. Lights are more variable here then in other packages and consist of Sun, Bulb, Spot, and Kleig with and without shadows. The cone of the light can also be shown, which is very helpful. Previewing the animation marches you through each frame.

Render

This is the final resting place of your work so that it may render to disk. You can see the rendered frames either in a "Mini" or full-screen fashion. Background color, ambient light, shadows and reflections, and antialiasing are added here as needed; ray-traced shadows and reflections can geometrically increase the time it takes to render a frame. A 256-color palette is chosen from the first frame of the animation and imposed upon the rest of the frames.

Comments

Playmation is a complex program to master, but it has features that no other program offers. Since it is so complex, you will want to spend a good deal of time studying the manual, which features some welcome tutorials for the beginner. It is no secret that the Amiga is no

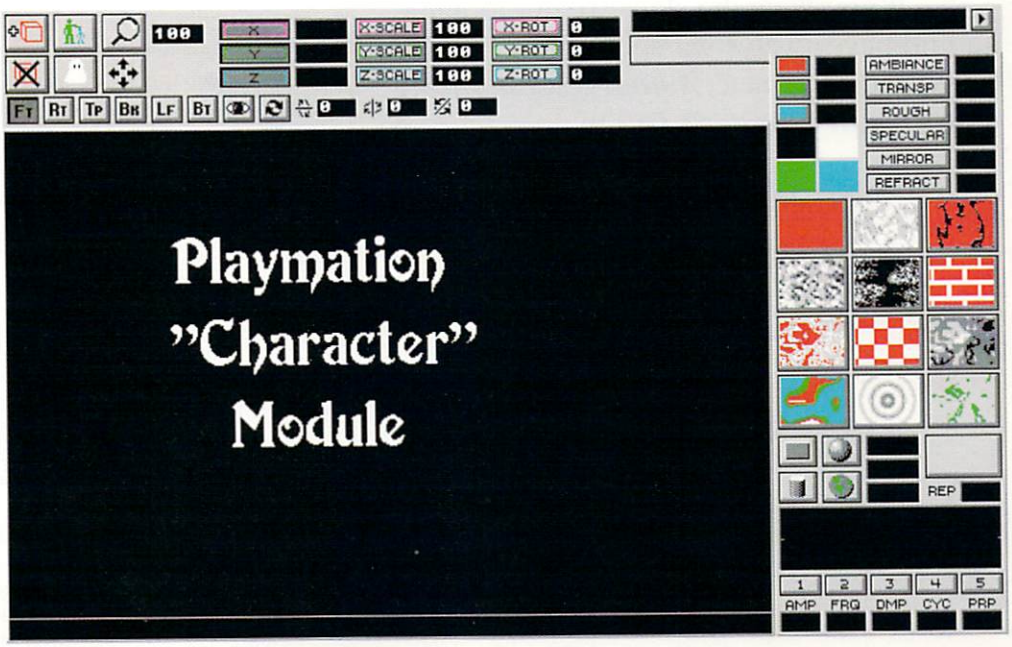


Figure 2. The Character module controls with the algorithmic textures on the right.

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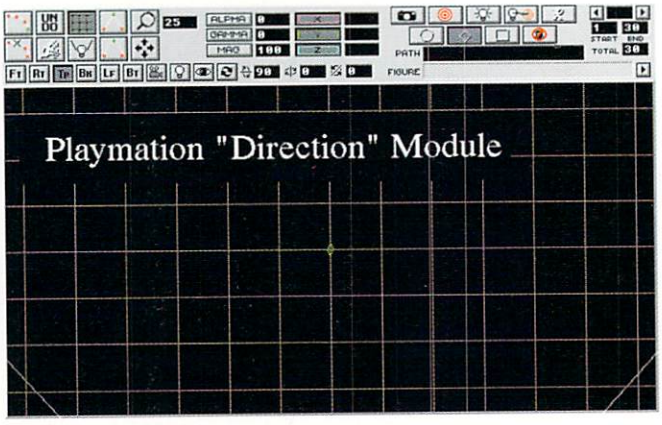
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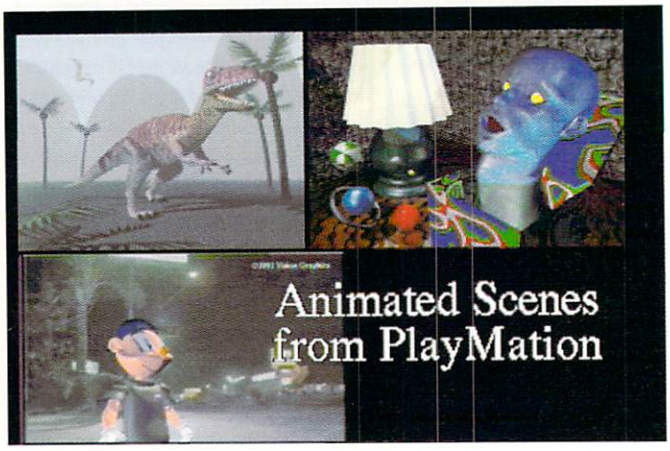
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Top: Figure 3. The top view of the grid and the controls in the Direction module. Above: Figure 4. A collection of objects and scenes created with the Playmation software.

longer Mr. Hash's machine of choice, owing to Commodore's historic habit of not pushing its market fast enough in the old days. The manual and the software are geared more toward the lucrative PC market, which is unfortunate because of the emerging A-4000 technology. I hope that a future version will address the A-4000 palette choices more fully. I also wish it would write to DCTV, thus breaking its palette barrier. Maybe it will in the future. It is little wonder why Will Vinton, a world class clay animator, chose this product as a bearer of his name. The organic motions fit his desire for fluid movement and character animation. It is sad that there is no immediate way to port Playmation objects and motions to any other Amiga software, but the spline file format is unique so that we shouldn't expect this at any time soon. In addition to experimental and dedicated professional uses, I would think this package should find use as a teaching tool in the education of young animators in the classroom. It is unlike any other Amiga animation product.

•AC•

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ARexx

Use ARexx and PostScript to Make Custom Forms for Your Business

by Merrill Callaway

There are many times in business when you need a form of some kind to keep track of things. For instance, businesses use an invoice whenever they sell goods or services. Small businesses sometimes use ready-made invoices available at office supply stores, but these leave a lot to be desired as you must fit your business to the form rather than vice versa. This month we will continue to explore the powerful way that ARexx may be combined with PostScript to produce and fill in any sort of custom form your business may need, and you don't need to know much about PostScript to do it! Our program will even save the data to a file for you to reference later or export to a database program.

String Handling

The most powerful and easy-to-use feature of ARexx is its string-handling capability. By string handling, we mean ARexx can take a string, a sequence of alphabetic and/or numeric (alphanumeric) characters, and manipulate it in a wide variety of useful ways. Parsing is the capacity to divide up any given string in user-specified ways. Parsing assigns the various parts of the original parse string to variables, called target tokens in ARexx. We use a PARSE template composed of target tokens and other symbols to control how to set part(s) of the parse string equal to the target tokens which we then use as variables—in ARexx, symbol tokens—in our program.

Another powerful string-handling feature of ARexx is its ability to make and control arrays, called stem symbol tokens, and individual array elements, called compound symbol tokens. An array is like a wall of post office boxes, a set of boxes in rows and columns containing elements of data in various formats. The P.O. box number corresponds to the term compound symbol token and the name of the post office—the array name—is the stem symbol token. Notice that ARexx nomenclature is a little abstract but, more importantly, it is unambiguous.

What About My Business Forms?

We will use the string handling of ARexx in a unique way here. We used ARexx to make a PostScript text printer before, but this time we will do something a bit different. We will work backwards from a PostScript ASCII print file that we have saved from *PageStream*, or any program you have that can save a PostScript print file. We will make our invoice form in our DTP or wordprocessor, entering "dummy" data, printing the file until the form looks right, and then we will save the print file to disk. We will divide up the print file into sections that contain "boiler plate" PostScript text that will not change, and sections containing changeable data such as customer address and purchase information. We will analyze the changeable sections with the intention to get ARexx to rewrite these sections with the new data inserted. We will use ARexx to prompt us in a shell for the data which changes on the form, and ARexx will store our responses in arrays. Then when we are finished, ARexx will re-compose the print file, "stuffing" the new data where it belongs into the PostScript instructions, in between the "boiler plate" sections. Finally, it will copy the entire re-composed file to the parallel port to which our laser printer is attached. The fancy customized form prints out with the new data in place, and the program stores just the data to a text file for reference or export later.

Finding the Data in a PostScript Print File

PostScript is a complicated language. I don't pretend to be an expert at programming in PostScript, but finding out where my data is by looking at a PostScript print file is easy. PostScript, like ARexx, is only ASCII text, and therefore readable. It's a cinch to find the places where my "dummy data" occurs inside the print file, yet I can leave the complex formatting to the PageStream print driver. I can leave these sections alone as they don't change between printing; they are "boiler plate" as far as I am concerned. ARexx makes it easy to substitute my own new data in between the "boiler plate" sections. It is quite easy to make up custom forms in a DTP program and adapt these ARexx listings to fit any type of form. I'll be specific only up to a point, therefore, because you will not be using my exact form. It's the technique I want to get across.

For Example:

I needed a two-part form for shipping *The ARexx Cookbook* to customers with one copy for me and a copy for them. Since carbons don't work on a laser printer, I designed a portrait-oriented invoice with two identical parts 8.5" W by 5.5" H with a dotted line across the middle of the page. After printing, I simply cut the page in half. The identical half-forms are designed to be folded in quarters and inserted



Circle 160 on Reader Service card.

into a plastic stick-on "Invoice Enclosed" holder with the address showing. I didn't want to write the address again, once I typed it into the shell. To insure symmetry, I completed one half of the form, grouped it, and then copied it to the other half of the page, aligning the two objects carefully. After a printout satisfied me, I printed once more to a print file on disk.

Separating the Changeable Data

Next, I looked at the print file, a large ASCII file of over 41K bytes. There were two areas in the file that contained the "variable data" such as name and address, the merchandise ordered, etc., one for the top and one for the bottom of the file. The rest of this large file could safely be treated as "boiler plate" text that never changes. In order to separate your variable data from the permanent data, you should use a different font for changeable data. That way, PostScript will set the font and write the data in one block rather than mix it in with your company name or other permanent text. I used Helvetica for everything except variable data, for which I used Courier font. That way, it looks as if the form has been "filled in" in the conventional way with a typewriter.

When I studied the print file, each block of variable data turned out to be one letter per line of PostScript. The ASCII character to be printed was surrounded by ()'s, followed by the letter "r"—PostScript rotate instruction. The first character in each block was followed by an integer, the number of the PostScript y offset. So the idea was to prompt the user at a shell to input data, write the information into an array, and add the parentheses and the "r" and y offset as appropriate. Then it was merely a question of re-composing the sections of PostScript "boiler plate" interspersed with the ARexx-generated arrays of data appended to a temporary print file in RAM. When finished, the program copies that file to the parallel port. I added the refinement of also appending those data arrays to a text file for future reference, so I will have a record of invoices in the computer, too.

Depending on what DTP or word processing program you use, and the layout of your form, your file will of course vary. The basic idea is the same, however; let the DTP driver do the hard work and let ARexx stuff the data into the right places. The listing of my ARexx program will serve to give you chunks of code to adapt for input of your data, error checking, control of the PostScript print files, handling arrays, and so on. The entire project took only a few hours to get a working draft invoice. I added refinements over the next few days. Note that there is a little address database used for frequent customers, such as distributors. This allows you to give steady customers a simple file name for their address, and you won't have to type it in every time. The data is appended to the end of a database every time you print. If you make a mistake, it's simple to edit this text file. Entries in the database are separated by asterisks. Some PostScript listings have been abbreviated because it would not be instructional to include them here, as yours will be different. The entire ARexx listing is included, however, as the code is easy to adapt for other uses. A picture of the invoice with typical data is included to give you an idea of the way the finished invoice looks.

Program Notes

The PostScript "boiler plate" print files are numbered in increasing order. Whenever there are missing numbers, that's where an ARexx generated array gets written. For example, first the program puts INVOICE.prt.01.header in the file RAM:prt. Then the address information array is appended to RAM:prt. That would be file "02". Then RAM:prt is joined in front of the next boiler plate file INVOICE.prt.03.boiler, followed by another ARexx-written file "04". There are no "05" or "10" files because of an improvement to the code (see the next paragraph). The cycle begins again at INVOICE.prt.06.boiler for the bottom half of the invoice.

Note the use of an interior function to write the address and the invoice to the upper and lower sections. The only thing that changes between the upper section of the invoice and the lower section is the y offset number in the PostScript print file. We simply pass this number as an argument to the interior functions and thus avoid coding the same things twice.

There are numerous error-checking refinements to insure that the arithmetic is correct. There are also built-in defaults, such as hitting [Rtn] means that the default is selected. This saves a lot of typing during invoice input. The various files are joined together using the JOIN AmigaDOS command, called from an ARexx ADDRESS COMMAND instruction.

Note particularly the way that compound symbols are used to generate the text data for the invoice part. Fillers of spaces are provided to format these data neatly the same way every time. This part is worth studying when you are making your own forms, because format is important to neatness and readability.

There are two databases: one for addresses, and one for finished invoice data stored in the database. Note how the ARexx program checks for too many characters and too many lines in the address. Otherwise your address would write outside the bounds of the address box on the invoice.

I hope I've given you some ideas to customize your business forms with ARexx and PostScript.

INVOICE.prt.01.header

```
%!PS-Adobe-2.0
%%Title: Unknown
%%Creator: PageStream v2.0
%%CreationDate: Not Available
%%For: Who Created This Document
%%Routing: How To Route Document Back
%%ProofMode: Substitute
%%BoundingBox:0 0 612 792
%%Pages:Unknown
%%DocumentFonts:
%%DocumentNeededFonts:
%%DocumentSuppliedFonts:
%%EndComments

%%BeginProlog
% $VER: 2.2.6 12/19/91

/AsphaltDict dup 153 dict def load begin

%
% some definitions & variables
%
/SG /setgray load def
/bdef {bind def} bind def
/xdef {exch def} bind def
/dmatrix matrix def
/cmatrix matrix def
/omatrix matrix def

/deltax 0 def
/deltay 0 def
/slant 0 def
/twist 0 def
/xscl 0 def
/yscl 0 def
/eang 0 def
/bang 0 def
/NwScrn false def

%
% string manipulations
%

%
% string string stringconcat string
%
/stringconcat
{
dup length 2 index length add string
dup 0 4 index putinterval
dup 3 index length 3 index putinterval
exch pop exch pop
} def


%
% drawing definitions
%

/sclm [0 0 0 0 0 0] def
/setscl {
  /deltay exch neg def
  /deltax exch neg def
  100 div /twist xdef
  100 div /slant xdef
  cmatrix setmatrix deltax neg deltay neg translate
  sclm 0 twist cos put
  sclm 1 twist sin put
  sclm 2 slant sin neg put
  sclm 3 slant cos put
  sclm concat
  /omatrix omatrix currentmatrix def
} bdef

/scl {
 deltay add exch
 deltax add exch
} bdef

/NW {newpath} bdef
/MT {scl moveto} bdef
/LT {scl lineto} bdef
/CRV {scl 6 2 roll scl 6 2 roll scl 6 2 roll curveto} bdef

/AT {
  100 div /eang xdef 100 div /bang xdef
  /yscl xdef /xscl xdef scl translate
  xscl yscl scale 0 0 1 bang eang
  arc omatrix setmatrix
} bdef

/AN {
  100 div /eang xdef 100 div /bang xdef
  /yscl xdef /xscl xdef scl translate
  xscl yscl scale 0 0 1 bang eang
  arcn omatrix setmatrix
} bdef

/CP {closepath} bdef

/LTYPE {0 setdash setlinewidth} bdef
/MF {gsave eofill grestore} bdef
/MS {gsave stroke grestore} bdef

%
% angle cx cy cropmark -
%
/cropmark {
  /cbv xdef /cbh xdef
  gsave translate rotate
  newpath
  cbh 6 add 0 moveto 20 0 rlineto
  0 cbv 6 add moveto 0 20 rlineto
  stroke grestore
} bdef
%*********************************************
% MANY LINES LEFT OUT HERE...
% JUST AN IDEA OF POSTSCRIPT PROLOG OUTPUT
%*********************************************
end
%%EndProlog

AsphaltDict begin
% Begin Page
% Begin Tile
("INVOICENEW.ps", Page #1, No Separations)
0 0 0 0 0 0 0 0 0 0 100 100 0 0 612 792 612 792 0 0 612 792 -1 -1 65535 65535
1 begintile
0 0 14124 72038 setscl
NW
3370 76034 MT
24878 76034 LT
24878 68042 LT
3370 68042 LT
CP
0 SHADE
MF
10000 SHADE
(Helvetica-Bold) 1800 1800 8 setfp
(W) 1691 3370 74338 p
(H) 1294 r
(I) 498 r
(T) 1095 r
(E) 1195 r
(S) 1195 r
(T) 1095 r
(O) 1394 r
(N) 1294 r
(E) 1195 r
(Helvetica) 1000 1000 0 setfp
(5) 553 3370 73086 p
(1) 553 r
(1) 553 r
(-) 331 r
(A) 664 r
( ) 276 r
(G) 774 r
(i) 221 r
(r) 331 r
(a) 553 r
(r) 331 r
(d) 553 r
( ) 276 r
(B) 664 r
(l) 221 r
(v) 497 r
(d) 553 r
(.) 276 r
( ) 276 r
(S) 664 r
(E) 664 r
(Helvetica) 1000 1000 0 setfp
(A) 664 3370 72036 p
(l) 221 r
(b) 553 r
(u) 553 r
(q) 553 r
(u) 553 r
(e) 553 r
(r) 331 r
(q) 553 r
(u) 553 r
(e) 553 r
(,) 276 r
( ) 276 r
(N) 718 r
```

```
(M) 829 r
( ) 276 r
(8) 553 r
(7) 553 r
(1) 553 r
(0) 553 r
(6) 553 r
( ) 276 r
( ) 276 r
( ) 276 r
(U) 718 r
(S) 664 r
(A) 664 r
(Helvetica) 1000 1000 0 setfp
(\() 331 3370 70986 p
(5) 553 r
(0) 553 r
(5) 553 r
(\)) 331 r
( ) 276 r
(2) 553 r
(6) 553 r
(8) 553 r
(-) 331 r
(0) 553 r
(6) 553 r
(7) 553 r
(8) 553 r
(Helvetica-Bold) 1500 1500 0 setfp
(T) 912 3370 68483 p
(o) 912 r
(:) 497 r
0 0 15129 65359 setscl
NW
6073 69654 MT
24185 69654 LT
24185 61064 LT
6073 61064 LT
CP
0 SHADE
MF
10000 SHADE
```

INVOICE.prt.03.boiler

```
0 0 30573 51044 setscl
NW
4830 58472 MT
56316 58472 LT
56316 43616 LT
4830 43616 LT
CP
0 SHADE
MF
10000 SHADE
```

INVOICE.prt.06.boiler

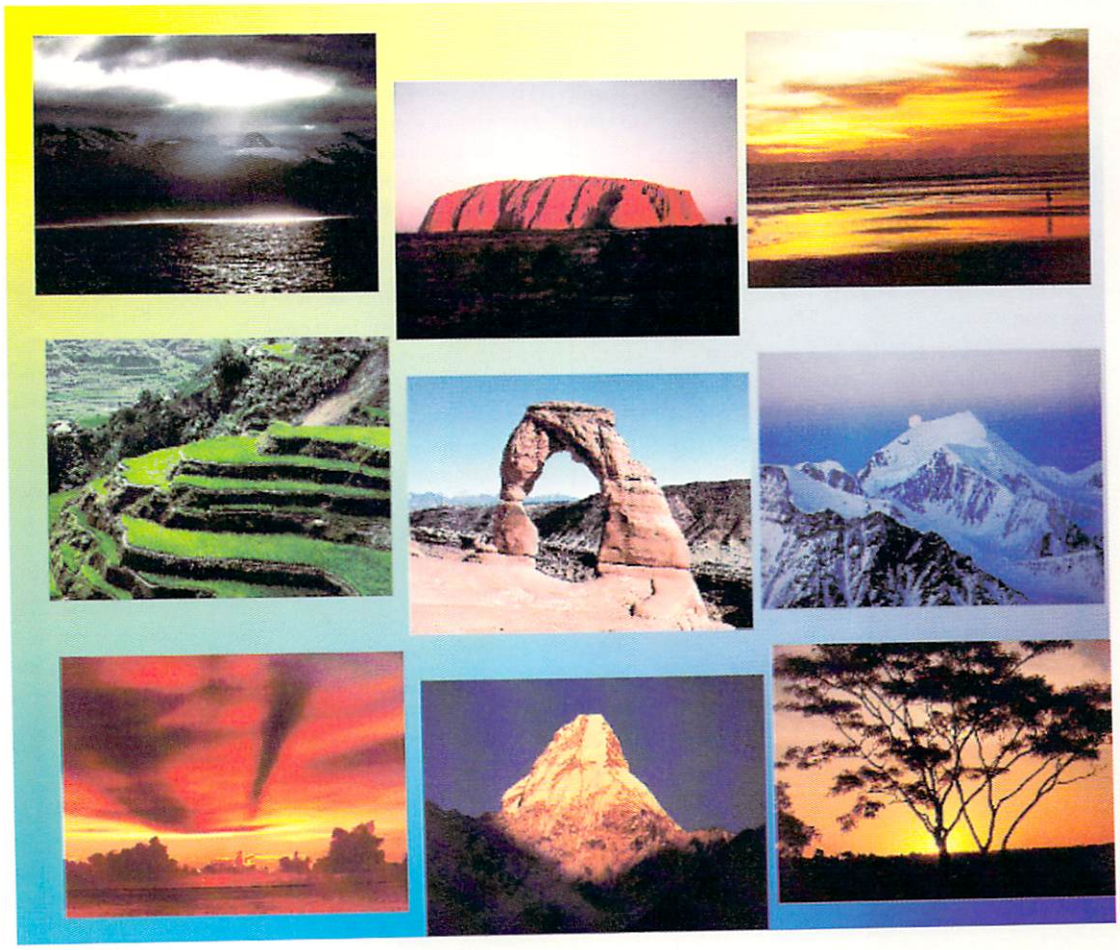
```
(Courier) 1200 1200 0 setfp
(T) 719 4830 45261 p
(h) 719 r
(a) 719 r
(n) 719 r
(k) 719 r
(s) 719 r
( ) 719 r
(f) 719 r
(o) 719 r
(r) 719 r
( ) 719 r
(y) 719 r
(o) 719 r
(u) 719 r
(r) 719 r
( ) 719 r
(o) 719 r
(r) 719 r
(d) 719 r
(e) 719 r
(r) 719 r
(!) 719 r
( ) 719 r
( ) 719 r
( ) 719 r
( ) 719 r
(M) 719 r
(e) 719 r
(r) 719 r
(r) 719 r
(i) 719 r
(l) 719 r
(l) 719 r
( ) 719 r
(C) 719 r
(a) 719 r
(l) 719 r
(l) 719 r
(a) 719 r
(w) 719 r
(a) 719 r
(y) 719 r
0 0 30358 39756 setscl
10000 SHADE
50 [100 300] LTYPE
NW
2050 39756 MT
58666 39756 LT
MS
0 0 13816 68789 setscl
NW
3590 75888 720 720 18000 9000 AN
24042 75888 720 720 9000 0 AN
24042 61690 720 720 0 27000 AN
3590 61690 720 720 27000 18000 AN
CP
10000 SHADE
200 [] LTYPE
MS
%************************************
%MANY LINES LEFT OUT HERE
%SHOWS MORE POSTSCRIPT BOILERPLATE
%NOTE THE PERMANENT DATA BELOW
%************************************
0 SHADE
MF
10000 SHADE
(Helvetica-Bold) 1800 1800 8 setfp
(W) 1691 3370 34819 p
(H) 1294 r
(I) 498 r
(T) 1095 r
(E) 1195 r
(S) 1195 r
(T) 1095 r
(O) 1394 r
(N) 1294 r
(E) 1195 r
(Helvetica) 1000 1000 0 setfp
(5) 553 3370 33567 p
(1) 553 r
(1) 553 r
(-) 331 r
(A) 664 r
( ) 276 r
(G) 774 r
(i) 221 r
(r) 331 r
(a) 553 r
(r) 331 r
(d) 553 r
( ) 276 r
(B) 664 r
(l) 221 r
(v) 497 r
(d) 553 r
(.) 276 r
( ) 276 r
(S) 664 r
(E) 664 r
(Helvetica) 1000 1000 0 setfp
(A) 664 3370 32517 p
(l) 221 r
(b) 553 r
(u) 553 r
(q) 553 r
(u) 553 r
(e) 553 r
(r) 331 r
(q) 553 r
(u) 553 r
(e) 553 r
(,) 276 r
( ) 276 r
(N) 718 r
(M) 829 r
```

(continued on page 60)

THE VIDEO SLOT!

by Frank McMahon

Before we discuss television production, last month we dicussed over 15 CDs that work with CDTV and a ParNet hookup. This month we'll finish up with a few discs that *don't* work and a new disc not to be missed. Here are some CDs that I found incompatible, or without usable information, with CDTV: *Cinemania*—all graphics encoded; *CD Rom Directory*—unable to locate any usable files; *CIA World Fact Book; PC Sig Library*—crash-prone; *Daytime Express; Great Cities of the World*—all graphic encoded; and *Walnut Creek MS Windows*. One disc just out this month that *does* work great is another disc by Aris Entertainment called *Majestic Places* (310-821-0234). Everything from Mt. Everest to Mt. McKinley, Tibet to Tahiti; this is *the* most graphically stunning CD I have ever purchased. It features grand snowcapped mountains, sunsets, lakes, deserts, waterfalls, and much more. The most impressive feature is the color in these photographs; it is very rich and all the graphics are perfect for Amiga desktop video production. The graphics are in various formats in 256-color for the Amiga 4000 and 24-bit. Also, the graphics can be reproduced in video productions royalty-free. Not only is it highly recommended, this disc is a virtual necessity.



Television Production

If you have an Amiga and are reading this column, chances are you have at least some interest in the mechanics of video production. You may have a genlock or even a Video Toaster and produce your own videos, be it a commercial enterprise or just a creative outlet. In past articles we've discussed ways to improve your productions as well as techniques to give them a professional look. This month we're going to set our sights just a bit higher: starting our own television show. It's not so hard as it seems, and it's something nearly anyone can accomplish; it just takes a little background information on the right way to go about. Most Amiga users are creative and visually oriented—prime candidates for television video producers!



"Local kids news show entitled 'Youth Media'. A Video Toaster is used for all switching, graphics creations, character generation, as well as set design"

Ever heard of Public Access Television? No it's not PBS but it's close. Years ago the federal government mandated that cable TV systems must provide a channel that the public has access to. The only problem was that most people did not have the equipment and training to produce a television production. So cable systems began purchasing equipment and developing departments to train the public on how to operate equipment, including editing, directing, lighting, and portable shooting. What started out as having to abide by the law turned into a great public relations tool. Cable companies could now provide a means for their customers to express themselves on their own cable system, enhancing the public's perception of the value of cable as well as the power of television.

In recent years the law has since been deregulated at a national level and left in the hands of the states and local towns. Most cable systems still do public access while a few have phased it out. It has also become a great sales tool if a certain cable company wants to expand into a particular town; the company can promise a studio, editing, and much more for the local residents. In Rhode Island, there is a state law regulated by the Public Utilities Commission stipulaing that every cable system have public access. The law also provides a list of equipment—two cameras, two decks, one editor, etc.—that each system must have to comply with the regulation. If the cable system doesn't comply, it loses the franchise for that town. The P.U.C. has also instituted a statewide public access interconnect channel, the first in the nation, where shows can be viewed statewide on every cable system at the same time.

As I've mentioned in previous articles, for the past six or so years, I've been the production supervisor for WCTV/Westerly Cable Television in Westerly, Rhode Island. I got my start doing public access shows over 10 years ago and have gained more knowledge and perfected my skills faster than any college course could hope to provide. As production supervisor, I oversee a staff who produce programming as well as provide training and help for public access members in our community. Using public access is an excellent way to develop your video skills and have a lot of fun.

So how do you get involved? Well the logical step is just to call your local cable company, perhaps asking for the local programming department. Inquire whether they provide a public access course since this is basically the first step. Before you can begin work on your own show, you must go through a public access course, even if you have previous video experience. There are several reasons for this preliminary course; even though you many be pretty handy with your own video setup at home, chances are that the cable system has completely different equipment. Another key issue is safety. You will be using thousands of dollars worth of equipment on loan from the cable system and they are going to make *very* sure you know how to use it properly before they lend it to you. Classes are all different lengths; some are every night for a week and others are only one day long. It depends on the equipment and how much the cable system is willing to put into the class or how much staffing they can provide.

Video Equipment Compatibility

Will the equipment you use at a cable system be the same as your home stuff? Maybe. At Westerly Cable we use all 3/4-inch decks and editors as well as broadcast cameras for public access. However, some systems provide SVHS or even VHS. Again it really depends on the cable company and how much they want and/or can afford to put in to it. The 3/4-inch format provides excellent quality, and any footage shot at home or with VHS, SVHS, or 8mm can easily be transferred to 3/4 inch for editing purposes. I always recommend staying with the same format, so if your cable system provides 3/4-inch equipment, then use it for all shooting and editing. In addition to field equipment—cameras, portable decks, audio, portable lights, etc.—the class will probably provide training in studio shoots as well as editing video. I always prefer shooting in a studio because it's such a controlled environment. Outdoors you are constantly combating the wind, traffic, and several other elements over which you have little control. While a studio is not as visually stimulating as the great outdoors, factors such as lighting and sound are much easier to manipulate. You can also enhance your shows, indoors or out, with graphics.

Enter the Amiga. You've often heard that the Amiga is prominent in cable. You may not know that most public access departments provide Amigas in addition to other video equipment for producing shows. In fact, many are now incorporating Video Toasters so public access members can use it as a switcher, character generator, and graphics machine. It only makes sense: every year when I do my budget, I always am amazed at how expensive some of this stuff is. A good character generator or switcher could easily be $10,000 or more. Cable systems budgeting for public access can't go wrong with a Toaster; it saves them thousands of dollars. Always wanted a Video Toaster? There may be one in your town you can use for free!

After you complete the course, you are usually given a certificate that allows you to use the equipment and start producing your own shows. Can you make money at it? No. Public access is strictly nonprofit. You can't take out the portable equipment, film a wedding, take it back to the studio, add Amiga graphics, then sell it. Public access was designed as a means for people

in the community to express themselves on cable television, not turn it into a business. There is leased access, however, which is prominent in some cable systems, especially in New York city, whereby someone can make a profit by renting the video equipment, producing a show featuring a product or service, for example, and then buying time from the cable system to air the show. Once again, it all depends on the specific cable system.

So after you've completed your course you can either produce your own show or work on someone else's. I always recommend to "rookie" access members that they volunteer to work on another show before they begin their own. It is the best way to learn and perfect your skills, so that by the time you are ready to begin your own production, you have developed some skill. We have a volunteer list, as most systems do, of members who may not have a particular show in mind but want to begin by helping out and learning the ropes.

The Video Crew

Often when people take a public access course,they don't realize they're going to need some people to help them, so here's a tip: Have your friends take the course with you. After you have taken the class, enlisted your friends, and are ready to begin your show, you may find you still need more people to help. Ask the production supervisor or a production assistant if there is a list of volunteers. Then arrange a meeting. Give the volunteers a synopsis, and then invite them to discuss the concept if they're interested.

What kind of shows can you do as a public access member? Just about anything. I have seen shows on so many topics, it's hard to keep track. You might want to do a show about the Amiga or a showcase for computer graphics. Years ago I did an access show called "Computer Bytes." It was pretty low budget but I had a good group of viewers. I would recommend that if you have an idea for a show, then type in some ideas. Try to create an outline and decide what your goals are and what audience you are trying to reach. It's best to concentrate on one specific thing than trying to make the show so jam-packed that it loses its focus. Work on heavily incorporating Amiga graphics in whatever show you do. Shows are unfairly judged on their graphic impact and the classier your show looks, then the more viewers you can hope to hook in.

Local Origination

Even though I'm in charge of public access, my staff and I don't produce public access shows. What we do is local origination programs—basically a separate set of shows produced by the staff . The shows could be anything from local town council meetings to talk shows. The reason I bring up local origination shows is that we could not do *any* of these shows without the help of public access members. They are an important part of all the local shows we do and help us greatly. I would strongly suggest after you complete your access course to investigate the possibilities of working on a local origination production. First you'll learn from the experts, the people who run the station and produce all the local shows. Plus you'll get exposed to a diverse group of programming, similar to the public access shows but a little different. Local origination shows are usually a little more high tech and I found that when I started in public access, I learned the most from working on the productions that the cable company produced.

In the end you'll take all the knowledge and apply it to your own Amiga productions at home. I can't stress enough that once you get involved in public access you'll suddenly see video production in a whole new light. You'll be more conscious of lighting, editing techniques, camera placement, and much more. You'll realize what works and what doesn't work. Plus along the way you'll have a lot of fun. Public access is one of our countries best kept secrets. It's an invaluable tool that promotes freedom of speech and the right to express yourself. With your talent for the Amiga you can craft a show that is professional and presentable. If you're one of those people that complains that there's nothing good on TV, it's time to do do something about it.

•AC•



"Public access members shoot and direct a variety talk show called 'Cafe West' hosted by the author. Deluxe Paint IV is used for title generation"

Please Write to:
Frank McMahon
c/o Amazing Computing
P.O. Box 2140
Fall River, MA 02722-2140

—*ARexx continued from page 56*

```
( ) 276 r
(8) 553 r
(7) 553 r
(1) 553 r
(0) 553 r
(6) 553 r
( ) 276 r
( ) 276 r
( ) 276 r
(U) 718 r
(S) 664 r
(A) 664 r
(Helvetica) 1000 1000 0 setfp
(\() 331 3370 31467 p
(5) 553 r
(0) 553 r
(5) 553 r
(\)) 331 r
( ) 276 r
(2) 553 r
(6) 553 r
(8) 553 r
(-) 331 r
(0) 553 r
(6) 553 r
(7) 553 r
(8) 553 r
(Helvetica-Bold) 1500 1500 0 setfp
(T) 912 3370 28964 p
(o) 912 r
(:) 497 r
0 0 15129 25840 setscl
NW
6073 30135 MT
24185 30135 LT
24185 21545 LT
6073 21545 LT
CP
0 SHADE
MF
10000 SHADE
```

INVOICE.prt.08.boiler

```
0 0 30573 11525 setscl
NW
4830 18953 MT
56316 18953 LT
56316 4097 LT
4830 4097 LT
CP
0 SHADE
MF
10000 SHADE
```

INVOICE.prt.11.boiler

```
(Courier) 1200 1200 0 setfp
(T) 719 4830 5742 p
(h) 719 r
(a) 719 r
(n) 719 r
(k) 719 r
(s) 719 r
( ) 719 r
(f) 719 r
(o) 719 r
(r) 719 r
( ) 719 r
(y) 719 r
(o) 719 r
(u) 719 r
(r) 719 r
( ) 719 r
(o) 719 r
(r) 719 r
(d) 719 r
(e) 719 r
(r) 719 r
(!) 719 r
( ) 719 r
( ) 719 r
( ) 719 r
( ) 719 r
(M) 719 r
(e) 719 r
(r) 719 r
(r) 719 r
(i) 719 r
(l) 719 r
(l) 719 r
( ) 719 r
(C) 719 r
(a) 719 r
(l) 719 r
(l) 719 r
(a) 719 r
(w) 719 r
(a) 719 r
(y) 719 r
0 0 13816 29270 setscl
NW
3590 36369 720 720 18000 9000 AN
24042 36369 720 720 9000 0 AN
24042 22171 720 720 0 27000 AN
3590 22171 720 720 27000 18000 AN
CP
10000 SHADE
200 [] LTYPE
MS
0 0 13804 30729 setscl
10000 SHADE
200 [] LTYPE
NW
2967 30729 MT
24642 30729 LT
MS
0 0 29947 11267 setscl
NW
2870 19631 MT
57024 19631 LT
57024 2903 LT
2870 2903 LT
CP
10000 SHADE
50 [] LTYPE
MS
0 0 44009 29207 setscl
NW
30880 37085 MT
57138 37085 LT
57138 21329 LT
30880 21329 LT
CP
10000 SHADE
50 [] LTYPE
MS
0 0 44112 29207 setscl
NW
31599 36601 MT
56625 36601 LT
56625 21813 LT
31599 21813 LT
CP
0 SHADE
MF
10000 SHADE
(Courier-Bold) 1000 1000 0 setfp
(W) 599 31599 35753 p
(H) 599 r
(I) 599 r
(T) 599 r
(E) 599 r
(S) 599 r
(T) 599 r
(O) 599 r
(N) 599 r
(E) 599 r
( ) 599 r
(P) 599 r
(R) 599 r
(O) 599 r
(D) 599 r
(U) 599 r
(C) 599 r
(T) 599 r
(S) 599 r
(:) 599 r
%**********************************
%LINES LEFT OUT
%PERMANENT TEXT DATA
%**********************************
(Courier) 700 700 0 setfp
(p) 419 31599 22046 p
(r) 419 r
(o) 419 r
(g) 419 r
(r) 419 r
(a) 419 r
(m) 419 r
(s) 419 r
```

```
(.) 419 r
9000 9000 26000 29317 setscl
NW
19729 30367 MT
32271 30367 LT
32271 28267 LT
19729 28267 LT
CP
10000 SHADE
(Helvetica-Bold) 1800 1800 0 setfp
(D) 1294 19729 28671 p
(O) 1394 r
( ) 497 r
(N) 1294 r
(O) 1394 r
(T) 1095 r
( ) 497 r
(B) 1294 r
(E) 1195 r
(N) 1294 r
(D) 1294 r
9000 9000 27740 29567 setscl
NW
21221 30617 MT
34260 30617 LT
34260 28517 LT
21221 28517 LT
CP
10000 SHADE
(Helvetica-Bold) 1800 1800 8 setfp
(D) 1294 21221 28921 p
(O) 1394 r
( ) 497 r
(N) 1294 r
(O) 1394 r
(T) 1095 r
( ) 497 r
(X) 1195 r
(-) 596 r
(R) 1294 r
(A) 1294 r
(Y) 1195 r
showpage
endtile
% End Tile
% End Page

%%Trailer
end
%%EOF
```

O.Rexx Order Invoice Printer and DBase Mgr.

```
/* O.Rexx Order Invoice Printer and DBase Mgr. */
OPTIONS RESULTS

start:
/* OPEN your master customer list data base file */
/* NOTE: Put in the path to your own file here   */
CALL OPEN('List','DATA:Customers/List','A')
print='no'
savefile=''
SAY 'Start: Enter filename. [Rtn]=Enter address',
'Q=Quit. L=List Addresses.'
PARSE UPPER PULL input
IF input == 'Q' THEN EXIT 0
IF input == 'L' THEN DO
   ADDRESS COMMAND 'DIR data:customers/addresses'
   SIGNAL start
   END

/* To enter new address */
enteraddress:
k=1 /* used as index of array */
IF input == '' THEN DO
   SAY 'Enter address: line 1 [Rtn], line 2 [Rtn],',
   'etc. ''''@ when finished.'
   DO FOREVER
      IF k>6 THEN DO /* checks for too many chars */
         SAY 'WARNING: Too many lines!'
         SIGNAL enteraddress
         END
      PARSE PULL line.k /* the address array */
      IF LENGTH(line.k)>24 THEN DO
         SAY 'WARNING: Line too long!'
         SIGNAL enteraddress
         END
      IF line.k='@' THEN DO;line.k='';SIGNAL Decide;END
       k=k+1
      END /* FOREVER */
   k=k-1
   END /* input==''*/

IF input -= '' THEN DO /* If you saved an address file before */
  IF OPEN('file','data:customers/addresses/'input,'R') THEN DO
      l=1
      /* read the address file */
      DO WHILE -EOF('file')
         line.l=READLN('file')
         SAY line.l
         l=l+1
         END /* DO WHILE */
      k=l-1
      CALL CLOSE('file')
      END /* IF OPEN */
      ELSE DO   /* error stuff */
         SAY 'Could not open your address file. Try again.'
         SIGNAL start
         END /* ELSE */
   END /* input -=='' */


/* INPUT DATA AND CHECK FOR ERRORS */
Decide:
SAY 'Enter discount: 10, 35, 50 etc. [Rtn]=No discount.'
PULL dsc
IF dsc='' THEN dsc=0
/* discount must be numeric */
IF -DATATYPE(dsc,'N') THEN SIGNAL decide
discount=1-(dsc/100)
SAY 'ENTER Quantity & TYPE OF ARexx Cookbook Set:'
SAY 'QTY on one line; Type on the next.'
SAY '[D]=Deluxe; [R]=Regular; [B]=Book Only; [Q]=Quit'
SAY '[I]=Companion Disk I ONLY; [II]=Disk II ONLY'
PARSE UPPER PULL qty, settype
IF qty='Q'|settype='Q' THEN EXIT 0
IF qty='' THEN qty=1
/* qty must be whole number */
IF -DATATYPE(qty,'W') THEN SIGNAL decide
IF settype == 'Q' THEN EXIT 0
IF settype == '' THEN SIGNAL decide
IF qty>1 THEN l = 's';ELSE l=''

/* VARIOUS COMBINATIONS OF MERCHANDISE   */
/* USE THE SELECT BLOCK FOR MULTI-CHOICE */
SELECT
WHEN settype == 'D' THEN DO
   bk='ARexx Cookbook '
   type='Deluxe Set'l' '
   /* NOTE how to force two decimal places */
  Cost=TRUNC(49.90*discount+.005,2)
   SAY '[Rtn] to OK 'qty' Deluxe Set'l' @ cost of $'cost,
   ', or Enter special price.'
   PULL newcost
   IF newcost -= '' THEN DO
      /* Another way to insure two decimals */
     IF DATATYPE(newcost,N) THEN cost=newcost+0.00
      END
   END

WHEN settype == 'R' THEN DO
   bk='ARexx Cookbook '
   type='Regular Set'l' '
  Cost=TRUNC(34.90*discount+.005,2)
   SAY '[Rtn] to OK 'qty' Reg. Set'l' @ cost of $'cost,
   ', or Enter special price.'
   PULL newcost
   IF newcost -= '' THEN DO
     IF DATATYPE(newcost,N) THEN cost=newcost+0.00
      END
   END

WHEN settype == 'B' THEN DO
   bk='ARexx Cookbook'l' '
   type=''
  Cost=TRUNC(24.95*discount+.005,2)
   SAY '[Rtn] to OK 'qty' Book'l' @ cost of $'cost,
   ', or Enter special price.'
   PULL newcost
   IF newcost -= '' THEN DO
     IF DATATYPE(newcost,N) THEN cost=newcost+0.00
      END
   END

WHEN settype == 'I' THEN DO
   bk=''
   type='Companion Disk I ONLY'
   Cost=9.95*discount+3.05
   SAY '[Rtn] to OK 'qty' Companion Disk'l' @ cost of $',
   cost' , or Enter special price.'
   PULL newcost
   IF newcost -= '' THEN DO
     IF DATATYPE(newcost,N) THEN cost=newcost+0.00
      END
   END
```

```
WHEN settype == 'II' THEN DO
   bk=''
   type='Companion Disk II ONLY'
   Cost=15.00*discount+3.00
   SAY '[Rtn] to OK 'qty' Deluxe Set'1' @ cost of $',
   cost', or Enter special price.'
   PULL newcost
   IF newcost ~= '' THEN DO
     IF DATATYPE(newcost,N) THEN cost=newcost+0.00
      END
   END

OTHERWISE SIGNAL decide

END /* SELECT BLOCK */

/* Shipping costs, check number, po number, etc. */
ship=5.00
IF bk='' THEN ship=0.00
SAY '[Rtn] to OK shipping cost of $'ship,
' or Enter different shipping cost.'
PULL newship
IF newship ~= '' THEN DO
   IF DATATYPE(newship,N) THEN ship=newship+0.00
   END

SAY 'Total amount is $'ship+(qty*cost)+0.00 '[Rtn]=OK'
PULL allright
IF allright-='' THEN SIGNAL decide


CHECK:
SAY 'Enter Check Number. Enter 0 for Accounts',
' Receivable, PO for Purch.Ord.'
PULL cknum
ckpo='Check No.'
IF -DATATYPE(cknum,W) THEN DO
   SAY 'Enter Purchase order number.'
   PULL cknum
   ckpo='Purchase Order No.'
   END

shipdate=DATE(USA)
DAT:
SAY shipdate 'is the ship date. OK?',
' [Rtn]=OK or...Enter new date.'
PULL OK
IF OK ~= '' THEN DO
   shipdate=OK
   SIGNAL DAT
   END

/* Save address? Print? Both? */
SAY '[P]=Print; [S]=Save address; [B]=Both; [Q]=Quit.'
SAY 'Invoice will be saved to order file in any case.'
PULL answer
IF answer = 'Q' THEN EXIT 0
IF answer = 'S' | answer = 'B' THEN DO
   SAY 'Enter filename. Default path is ',
   'data:customers/addresses/'
   PARSE PULL savefile
   savefile = 'data:customers/addresses/'savefile
   IF OPEN('outfile',savefile,'W') THEN SAY 'Saving 'savefile
   DO n=1 TO k-1
     CALL WRITELN('outfile',line.n)
      END /* DO */
   END /* S  | B */
IF answer == 'P' | answer == 'B' | answer == '' THEN print='yes'
IF print = 'yes' THEN SIGNAL printinvoice
SIGNAL start


printinvoice: /* A data array of purchase information */
/* Compute the number of filler spaces for           */
/* the check and ship date and other lines           */
filler.0=COPIES(' ',40-LENGTH(cknum)-LENGTH(shipdate))
inv.0=ckpo cknum'  Shipped 'shipdate||filler.0
inv.1=' '
IF dsc>0 THEN inv.1=dsc'% Discount'
inv.2.1=qty bk type '@' cost
inv.2.2=cost*qty
inv.3.1='Shipping and Handling'
inv.3.2=ship
inv.4='_______'
inv.5.1='Total'
inv.5.2=qty*cost+ship

filler.2=COPIES(' ',60-LENGTH(inv.2.1)-LENGTH(inv.2.2))'$'
inv.2=inv.2.1||filler.2||inv.2.2

filler.3=COPIES(' ',61-LENGTH(inv.3.1)-LENGTH(inv.3.2))
inv.3=inv.3.1||filler.3||inv.3.2

filler.4=COPIES(' ',53)
inv.4=filler.4||inv.4

filler.5=COPIES(' ',60-LENGTH(inv.5.1)-LENGTH(inv.5.2))'$'
inv.5=inv.5.1||filler.5||inv.5.2


/* Make the print files */
/* Copy header material to output file */
file.1='DATA:Customers/Printfiles/INVOICE.prt.01.header'
ADDRESS COMMAND 'COPY 'file.1' TO RAM:PRT'
CALL OPEN('PRT','RAM:PRT','A')

/* name and address top */
posnum=68443
CALL ADDRESSWRITE(posnum)
/* end of name and address top */

CALL CLOSE('PRT')

ADDRESS COMMAND,
 'JOIN RAM:PRT DATA:Customers/Printfiles/INVOICE.prt.03.boiler AS RAM:J'
ADDRESS COMMAND 'COPY RAM:J TO RAM:PRT'
CALL DELETE('RAM:J')

CALL OPEN('PRT','RAM:PRT','A')

/* write invoice top */
posnum=57261
CALL INVOICEWRITE(posnum)
/* end of writing invoice top */

CALL CLOSE('PRT')

ADDRESS COMMAND,
 'JOIN RAM:PRT DATA:Customers/Printfiles/INVOICE.prt.06.boiler AS RAM:J'
ADDRESS COMMAND 'COPY RAM:J TO RAM:PRT'
CALL DELETE('RAM:J')

CALL OPEN('PRT','RAM:PRT','A')

/* write name and address bottom */
posnum=28924
CALL ADDRESSWRITE(posnum)
/* end write address bottom */

CALL CLOSE('PRT')

ADDRESS COMMAND,
 'JOIN RAM:PRT DATA:Customers/Printfiles/INVOICE.prt.08.boiler AS RAM:J'
ADDRESS COMMAND 'COPY RAM:J TO RAM:PRT'
CALL DELETE('RAM:J')

CALL OPEN('PRT','RAM:PRT','A')

/* write invoice bottom */
posnum=17742
CALL INVOICEWRITE(posnum)
/* end of writing invoice bottom */

CALL CLOSE('PRT')

ADDRESS COMMAND,
 'JOIN RAM:PRT DATA:Customers/Printfiles/INVOICE.prt.11.boiler AS RAM:J'
ADDRESS COMMAND 'COPY RAM:J TO RAM:PRT'
CALL DELETE('RAM:J')

SAY 'Print Invoice & Save Data? Y/N'
PULL answer
IF answer = 'Y' THEN DO
   ADDRESS COMMAND 'COPY RAM:PRT TO PAR:'
   DO y=1 TO k
     CALL WRITELN('List',line.y)
      END
   DO Z=0 TO 5
     CALL WRITELN('List',inv.z)
      END
  CALL WRITELN('List',COPIES('*',61))
```

```
   END

CALL CLOSE('List')
IF EXISTS(savefile) THEN CALL CLOSE('outfile')
CALL DELETE('RAM:PRT')
SIGNAL start

EXIT 0



/* writes the address based on the posnum sent as an argument */
ADDRESSWRITE: PROCEDURE EXPOSE line. k
PARSE ARG posnum
starting='(Courier) 1200 1200 0 setfp'
/* extract chars out of address lines */


DO i=1 TO k
   /* take a line */
   pline.i=line.i
   v=1
   /* chars out of line */
   DO WHILE pline.i ~= ''
      PARSE VAR pline.i ch.v +1 pline.i
      v=v+1
      END
   v=v-1
   IF i<k THEN CALL WRITELN('PRT',starting)
   /* write characters to file */
   DO t=1 TO v
      IF ch.t='' THEN ch.t=' '
      IF t=1 THEN ch.t='('ch.t') 719 6073 'posnum' p'
      ELSE ch.t='('ch.t') 719 r'
      CALL WRITELN('PRT',ch.t)
      END
   posnum=posnum-1500

   END
RETURN



/* writes the invoice based on the posnum sent as an argument */
INVOICEWRITE: PROCEDURE EXPOSE inv.
PARSE ARG posnum
starting='(Courier) 1200 1200 0 setfp'


DO j=0 TO 5
   /* take a line. */
   pinv.j=inv.j
   /* take the characters out of line of 60 */
   DO m=1 TO 61
      PARSE VAR pinv.j chr.m +1 pinv.j
      END
   CALL WRITELN('PRT',starting)
   /* write chars to file */
   DO n=1 TO 61
      IF chr.n='' THEN chr.n=' '
      IF n=1 THEN chr.n='('chr.n') 719 4830 'posnum' p'
      ELSE chr.n='('chr.n') 719 r'
      CALL WRITELN('PRT',chr.n)
      END
   posnum=posnum-1500
   END
RETURN
```

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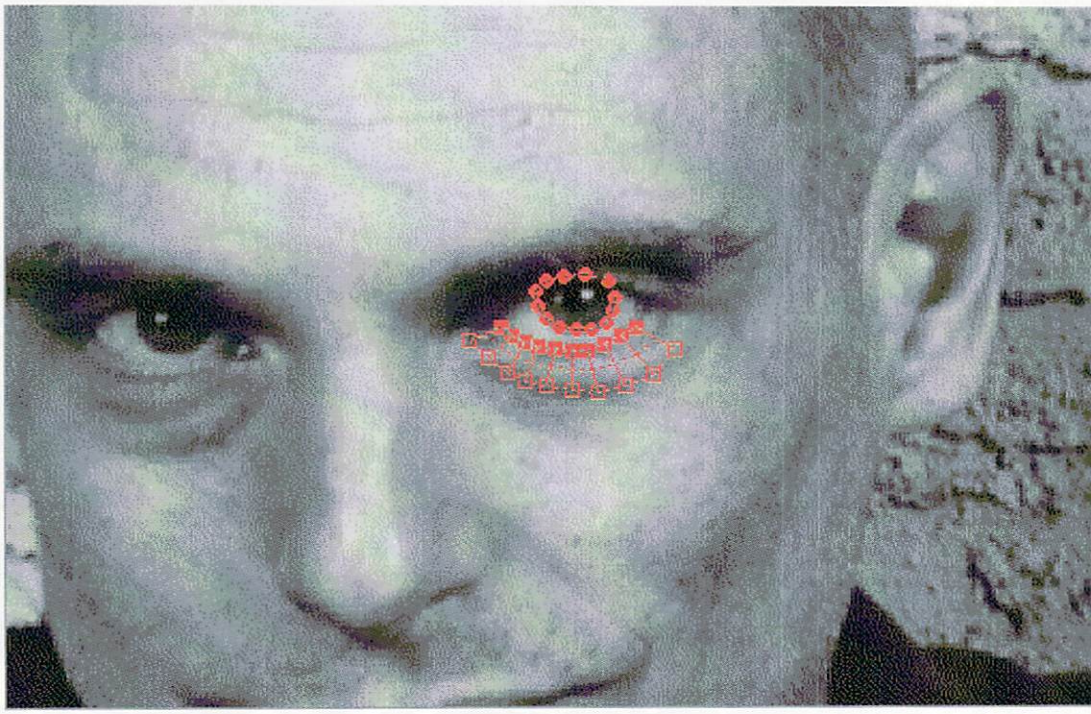
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by Merrill Callaway



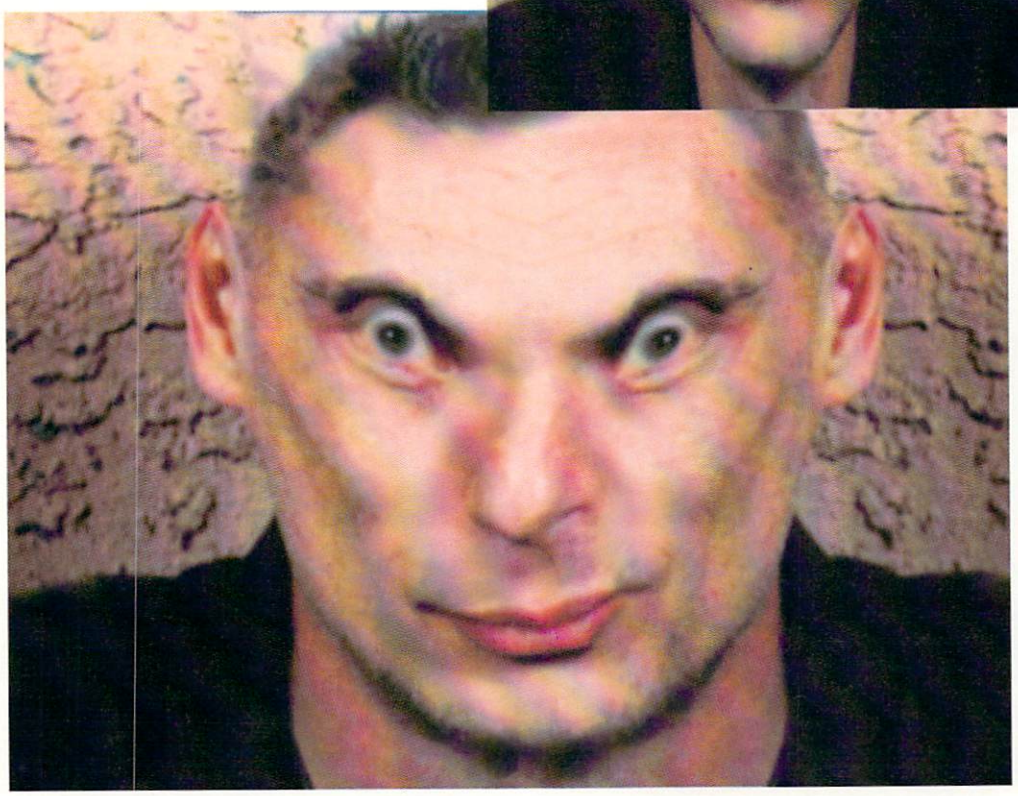
Fun with MorphPlus

I can remember being bored out of my skull in eighth grade civics class. The temptation to pencil in a moustache on the queen, or to blacken the tooth of some president was sometimes overwhelming; and I confess that I gave in to this amusement on occasion. On more creative days, I would generally get caught drawing caricatures of our spinster teacher, and spend some time out in the hall assigned to label all the states and their capitals with crayons, one color per letter, to take up more time. To this day, I know that Montpelier is the capital of Vermont, and that Pierre, South Dakota, is the only capital that shares no letters with the name of its state; but what I really want to discuss with you is something much more cosmic and infinitely more fun than those

Monsterizing Made Easy!







Top: A first attempt at warping the eyes and ears. Note the asymetrical face. Right: After warping the image even more, half the face was cut as a brush in Light24 then mirrored and flipped to create the other half. Below: Yet more modifications to the original morph.

moustaches and black teeth. What we are going to do is learn to morph your friends into aliens! With *MorphPlus* by ASDG and your favorite paint program, you can spend a pleasurable evening "monsterizing" those you love, or hate. I thought that my friend Harry Morris, an Amiga artist specializing in horror illustrations, would be an excellent first victim for my new painless plastic surgery. Harry is always a little subversive. He saw my pictures and said, "Gosh, I wish I could really look like that!"

First you need a digitized picture of someone's full face. Try to select a portrait taken against a plain wall so that details will not intrude. Scan the picture into your Amiga. I used an Epson ES-300C 24-bit flatbed scanner, but *DigiView* or even a Migraph hand scanner will work. You will want to fill a screen with the image. You can crop the image in *ADPro* or use the ADPro Scale Utility from Disk I of *The ARexx Cookbook* to fill your screen with the image without distortion. You are now ready to do some digital plastic surgery on your victim's face using MorphPlus by ASDG. By using various vectors (see pictures), morph the face into something distorted, but not too distorted. You will want to play around with the eyes especially. Also, don't forget to make the ears pointed and put subtle expressions around the mouth with short vectors. The eyes and mouth contain most of a face's expression, but the nostrils, eyebrows, and ears also contribute. You can also expand the head's overall brain

MOVING?



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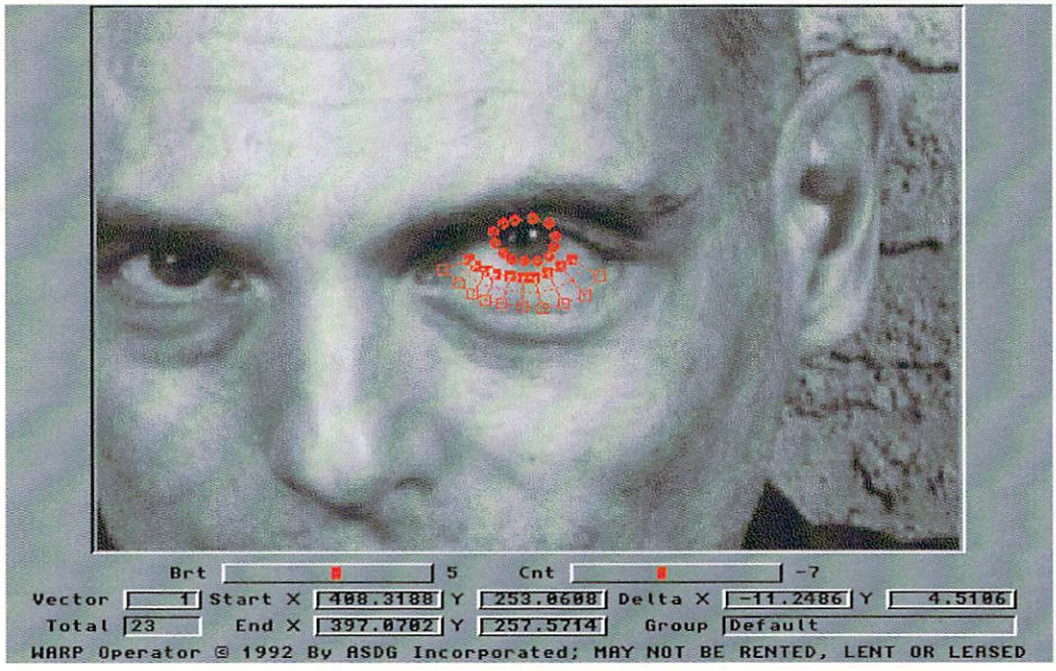
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size somewhat, as aliens are always smart. Anyway, whenever you are moving part of the face outside the original head area, first "nail down" the outline between the head and the background with connected zero vectors. These vectors don't move and they serve to prevent the background moving with the face area. If the background is plain, this is less important. In the Warp Operator menu, make the vectors that carry the face outside the head area in front of the zero vectors. Then the pointed ears will pull over the background without changing it. If you want to keep the irises in the eye round while moving the eyelids, then stitch them down the same way.

I started out by experimenting differently on each side of the face, and obtained a lopsided alien that wasn't that convincing. Then I remembered that most people will look really different if a facial picture of them is divided by a mirror with both sides identical. Small differences in each side account for the two different looks. At this point, I took the lopsided image into *Light24* on my Firecracker display board and cut a brush of one side of the face divided down the middle. Then, I made a mirror image of it, and pasted it down. A brush in smoothing mode softened the edges. I did the same mirror treatment for the other side and got an entirely different image. This time I didn't want such a symmetrical face, so I cut out the hair as a brush from one of the earlier different-sided images and also the nose. These I pasted down on the symmetrical face and smoothed the edges. I made slight MorphPlus and Light24 changes to this composite image to get the finished product. The only point to keep firmly in mind is not to make the vectors too long. Think of the picture as made of rubber and remember that all points not stitched down with the zero vectors will be affected. If your vectors are too long, the face will not look lifelike. Small changes, however, can result in humorous or alien effects, depending on how you alter the expression. You will learn what parts of the face really affect its expression as you continue to experiment. MorphPlus operates on complex mathematical and technical principles, but that's no reason not to have fun with it!

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The Warp Operator interface after the vectors have been accepted. Keeping the vectors short, connecting them for a smooth transition, and doing only one small step at a time will allow you to make any expression or deformity you wish.



ROOMERS

by The Bandito

[These statements and projections presented in "Roomers" are rumors in the purest sense. The bits of information are gathered by a third-party source from whispers inside the industry. At press time, these rumors remain unconfirmed and are printed for entertainment value only. Accordingly, the staff and associates of Amazing Computing *cannot be held responsible for the reports made in this column.]*

Golden Boys

Has anyone noticed how much Gold Disk has grown lately? They have expanded enormously from their early days, when they were a wee, small Amiga developer. Now Gold Disk has important packages for Windows and Macintosh as well as some of the best-selling Amiga software. Fortunately, Gold Disk knows where their strength comes from, and they continue to push their Amiga development along with their Windows and Macintosh product lines. The Bandito appreciates that they haven't forgotten their Amiga roots, unlike some other erstwhile Amiga developers.

Here's a model for successful software development on the Amiga that other developers would do well to follow. The Amiga's unique capabilities make some things much easier to create than other platforms. And once you make that software, you can translate that success to other computers where the sales are larger. The Amiga market has also had the advantage of being less expensive to compete in; marketing budgets are measured in tens of thousands, rather than millions.

Another company following this strategy is Virtual Reality Laboratories, makers of *VistaPRO* and *Distant Suns*. They've done very well putting those programs on PC's and Macs, but they continue to use the Amiga as their leading technology platform. The Bandito would like to see more of this sort of Amiga development... any takers?

Amiga Add-ins

One of the more eagerly awaited extras for the A4000 is a SCSI interface card. Many people were disappointed that Commodore did not include a SCSI interface with the A4000, but instead chose to use the less-expensive IDE interface. The Bandito thinks this wasn't such a bad choice; after all, it kept the price of the A4000 lower, and for most hard drives IDE is cheaper than SCSI and offers effectively the same performance. The differences appear when you try to hook up other devices besides hard drives, like scanners and CD-ROMs, or more than two hard drives or other devices. IDE is limited to two hard drives; SCSI can have up to seven devices on its chain.

Commodore is coming out with a Zorro III SCSI-II card for the A4000, using the latest in SCSI standards to give you exceptionally high performance. This card appears to be the fastest SCSI card for any platform; the Bandito hears that you'll get up to 10 MB/sec throughput—with the right hard drive, that is. This should allow for 30-fps animations in HAM8 mode to be streamed from your hard drive. Now that's pretty cool, isn't it? Of course, 30 fps animations will take up a lot of room, but coincidentally the only drives that can support that sort of data transfer rate are usually in the one gigabyte neighborhood—enough for a few minutes of really cool animation.

While we're talking about cool new cards from Commodore, here's one that will sock you in the ear. The Big C is planning to ship their DSP (digital signal processing) card by mid-spring for the A4000; simultaneously, AmigaDOS 3.1 will be released to support it. This card is blazingly hot; it's got an AT&T 32-bit chip running at 40MHz that will blow the doors off of other DSP chips, like the one from Motorola. What does this mean to you? Well, once the software developers get busy, quite a bit, actually. For starters, CD-quality audio, high speed modems, and voice recognition are all eminently do-able with this chip. The old talking Amiga will sure sound a lot different with the right software, sez the Bandito. Ah, but what about the pricing of this miraculous piece of hardware? Well, it won't be all that cheap; the DSP chip itself is expensive. But Commodore will strive to keep the costs down, because they know how much this chip can do and they want many Amigas taking advantage of it. If the cost of the chip comes down, future Amigas may have this capacity built in.

Adobe for Amiga?

The Bandito is wondering, along with other Amiga users, why Commodore still hasn't gotten around to making a deal with Adobe. It's nice that there's a Postscript driver in the latest version of AmigaDOS, but what desktop publishers really want is Adobe Type 1 support for the Amiga. This is the standard in desktop publishing, and it should be part of the Amiga package. Compugraphic fonts just don't cut it, not when all the service bureaus use Adobe or TrueType fonts. While you can find work-arounds to the problem, it would be a lot nicer if Adobe fonts were the standard on the Amiga. Then Mac and PC users could add Amigas to their desktop publishing repertoire, if the advantages were pointed out. The Amiga could have an enormous advantage in desktop publishing because of the speed of graphics manipulation. Watch someone trying to move a big color picture on a Mac sometime and you'll really appreciate what a blitter can do for you.

Speaking of color pictures, this is the cutting edge right now in desktop publishing. Many people are looking to create a device-independent color standard. If the Amiga could be in the forefront of this effort, there would be a lot of sales potential to frustrated desktop publishers trying to get their color printing to match what they saw on their color monitor. Are any of the software developers up to the challenge? Can Commodore find a way to help out? There is one thing already on the list for the future that will help, and that's RTG (retargetable graphics). This means that expanding the size and color resolution of the Amiga screens will be much, much easier. In order to compete effectively in desktop publishing, the Amiga also needs to add support for multiple monitors (creating enormous virtual desktops) and retargetable graphics for easy addition of two-page monitors.

Amiga Games—Win Some, Lose Some

The Bandito has some bad news to report about what you can expect for Amiga games. If you like adventure games, you won't like this news: Sierra Online has dropped all Amiga support plans for the time being. They say they gave it their best shot, but the sales were just not enough to justify the costs of developing for the Amiga. Of course, their games really require a hard disk, and that cuts down on the size of their potential market, too, especially in Europe. While some of Sierra's early Amiga products weren't all that well done, their quality had come up quite a bit. In particular, their Dynamix subsidiary had produced some very nice Amiga versions of PC games—check out *Red Baron*, if you haven't seen it. Still, it's an annoying occurrence, and one the Bandito hopes doesn't become a trend.

The Bandito has also heard that Lucasfilm Games may be dropping Amiga support; the latest *Indiana Jones* game will be its last Amiga title. It's the same old set of reasons: not enough sales, too many disks, and too much development effort.

What can we do to prevent companies from dropping Amiga support? It may not be possible, but there are some things we can try. Buy more software, and don't pirate it. If you know of a pirate, try to make him stop. If you see a pirate BBS, report it to the companies they're ripping off. Ask for Amiga software at the various software chain stores; the more people who ask, the more likely they are to carry it.

There is some good news coming out from some game companies, though. Microprose is said to be developing a version of *Civilization* to run in AGA mode on the Amiga. And we will probably see some AGA Amiga games from Psygnosis, too. And if Commodore sells enough AGA Amigas, you can bet we'll see more games appearing for them. Where there's a market, there's a product.

Eye on CD-I

The latest salvos in the CD-ROM wars were fired last Christmas. Big bucks were spent in advertising trying to sell CD-ROM systems. Unfortunately, none of it was spent advertising CDTV. According to the Bandito's informants, television commercials appeared for Tandy's VIS, Sega's Sega CD and CD-I at Xmas, though not for CDTV. Philips is also in the middle of a massive print advertising campaign for CD-I, using several different two-page spreads in expensive magazines like *Scientific American*. CD-I players were also in evidence at various software stores and at Blockbuster video. Even with that, though, CD-I players didn't exactly leap off the shelves. Once again, people stopped before buying when

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confronted with the basic question: why am I spending $600 for this thing?

The games for CD-I are weak; some rehashes of old favorites, like *Defender of the Crown* and *Battleship*, and some looking like *Dragon's Lair* retreads, as with *Escape from Cybercity*. With that funky CD-I controller (it's called a "thumbstick") you can't have any really fast arcade games—the hardware isn't really up to that, either. Not that CDTV's controller is all that great, though. Anyway, the point is that if what you're mainly interested in is playing games, your best bet is a Nintendo or a Sega; there's plenty of games for them, and the machines are cheaper than anything else.

If what you want is educational stuff for your kids, then maybe CD-I or CDTV offers something for you. But if you already happen to have a Macintosh or an IBM, then for the same $600 you could buy a CD-ROM drive for your computer and have a lot more software to choose from.

If what you want is a computer that lets you play games, have access to CD-ROM titles, and is expandable, and you don't already have a computer, then CDTV is the right choice. But either there's not a lot of people out there like that, or else Commodore's marketing hasn't been on target. The Bandito thinks the answer is a combination of both.

Anyway, Philips may not have the best hardware to sell, but they sure have been spending money on advertising to make up for it. Unfortunately, their CD-I ads are long on style and short on substance. Nary a screen shot to be seen; even the TV ads didn't show you the screen, except in one ad, a brief, off-angle shot that lasted for a fraction of a second. No wonder people aren't buying; who wants to pay $600 for something without knowing what the output is? At least the VIS ad on TV showed lots of screens, though it wasn't exactly clear what you did with the machine. All the screen shots were static, which is a good idea when you have an 80286 driving a 24-bit display under Windoze. That hardware/software combo gives new dimensions to the concept of patience.

Still, with sales still going nowhere after all that advertising, Philips may be getting desperate about CD-I. They've spent nearly a billion dollars so far, by some estimates, on CD-I. With unit sales in the low tens of thousands, you don't have to be a Nobel Prize winner to figure out that they haven't realized a profit on their investment yet. Their corporate performance as a whole has been dismal lately, with huge losses and layoffs. So what can they do? They can stay the course and hope that things turn around for them. They can cut their losses and run, though that would be taking a rather expensive bath. Or they can try something dramatic to invigorate the market.

Philips is hoping that their upcoming MPEG full-motion video module for CD-I will do the trick. This will be built into future CD-I players, and possibly offered as an upgrade to current CD-I owners. The plan is that with this module, you'll be able to play a full 72 minutes of VHS quality video from a CD. Philips figures that this will be a hot seller; adding a pseudo-laser disc feature to the CD-I player will make it irresistible. The Bandito sees a few problems with this rosy projection, though.

The best estimates have the minimum additional costs for the FMV add-in to be $200 retail, and possibly more. So the CD-I player becomes $799 once again, the price at which Philips had trouble selling more than a few thousand units. Anyway, for that price, you can now play 72 minutes of video from a CD. So what? You can buy a VHS recorder for $200, play tapes up to 6 hours in length, choose from tens of thousands of titles at really low prices, *and* you can record your own TV programs if you want. Or if you want to spend $400, you can get very high quality laser discs that store a whole movie, and choose from thousands of titles. Seems to the Bandito that CD-I offers less features for more money, a surefire way to lose sales.

Sure, sure, part of the plan is to have products include full-motion video; you know, games with talking heads, like that Sherlock Holmes CD-ROM. Well, when the CD-I player is playing video, it doesn't have the bandwidth to do anything else, so the more video a game has, the less interactive it becomes. It's not like you're going to be able to control a character in a movie and make them run and jump just like in an arcade game. So this feature may not be all that wonderful in convincing buyers to part with their hard-earned dollars.

The Bandito thinks it's hopeless for CD-I no matter what they try, unless they succeed in getting better software. CD-I (and

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CDTV, and all the other CD-ROM machines) is still missing that magical "killer app"—the piece of software so compelling, so useful, that you just have to buy the hardware to get it. Maybe that piece of software is possible to create, and maybe it isn't. But without it, a CD-ROM machine is a tough sell.

Philips is looking into some options, though. One avenue being contemplated is to cut a deal with Apple so that CD-ROM-equipped Macs might be able to run CD-I discs, in some sort of bizarre CD-I emulation. This would dovetail nicely with Photo CD compatibility of both Macintoshes and CD-I players. And there were some big announcements last year about a deal between Philips and Nintendo, so that Nintendo's CD-ROM player for its Super NES would be CD-I compatible (somehow). But this seems to have fallen through; now Nintendo is announcing (or rather, reviving) plans to develop a CD-ROM drive in collaboration with Sony. (Originally, Nintendo had cut a deal with Sony; then they announced a deal with Philips; now the deal with Philips isn't being talked about any more, while they are re-announcing the deal with Sony. Rather confusing, but the Bandito suspects that poor CD-I sales are at the root of it.)

On the positive side for CD-I is that they hired Gail Wellington, late of Commodore's CDTV division. Or, rather, Optimage hired Gail as VP in charge of sales and marketing. Optimage is a company set up by Philips to produce and market CD-I authoring tools. So maybe there is some hope for CD-I after all, if someone as savvy as Gail Wellington is signing up with their team. (Or maybe they just offered a great salary.)

There's one final trick that Philips might pull. They are a very large corporation, and they just might be interested in picking up a computer company; perhaps Commodore might be acquired by the Dutch giant. Philips would gain some rather nifty technology, a competitive position in the computer market, and perhaps some ideas that might make CD-I more successful. But the Bandito thinks it's unlikely; Irving Gould probably doesn't want to sell, and Philips seems to be too convinced of the rightness of their course. Well, we'll just have to wait and see how it all turns out, won't we? The Bandito's prediction: both CD-I and CDTV will become footnotes to history. Some other CD-ROM device will be the breakthrough product that makes CD-ROM a household device. Maybe, if Commodore is on the ball, it will be CDTV II.

3DO Revealed

Electronic Arts' new venture, formerly called SMSG, has now been dubbed The 3DO Company. No more informative, but it does roll off the tongue a little better. So what have these people been working on, anyway? The Bandito hears that they're working on some really spiffy CD-ROM hardware; it's some sort of game machine with incredible custom chips and a fast CD-ROM drive built-in. The interesting part is that 3DO has gotten several major hardware companies lined up to manufacture this device; the idea is to make it a standard like VHS VCRs. Who designed this hardware? None other than former Amiga hardware gurus RJ Mical and Dave Needle have been laboring in secret for quite a while. The last project they worked on, you may recall, was the handheld Lynx game now sold by Atari. The Bandito hears some incredible things about the graphics and sound capability of this machine; developers are very impressed with the hardware and the marketing plan. No word yet on exactly what it does, how much it will cost, or when you might see it, but the Bandito will be fishing for stray data in the oceans of cyberspace. (Right now, the Bandito's best guess would be Christmas '93. Could this be the ultimate game machine that Trip Hawkins wanted the Amiga to be?

Legal Proceedings

The Bandito occasionally gets bored with incredible inventions and awesome graphics, and then it's necessary to check on how the legal battles in the high-technology world are proceeding. Nothing like legal briefs to make you crave for press releases, the Bandito always says. Anyway, here's the latest word: Electronic Arts has settled its legal disputes with the cable sports network ESPN. Both sides were throwing lawsuits at one another over EA's use of the Electronic Arts Sports Network (EASN) logo in various sports games; ESPN thought it looked a little too much like the ESPN logo—which it does. After the lawyers racked up a good chunk of billable hours, here's the final result: EA has to change the name of the EA Sports Network, and has agreed to advertise its games heavily on ESPN. Sounds to the Bandito like EA lost that particular battle.

Meanwhile, Accolade is the winner in its legal action against Sega; you may remember that Sega had prevented Accolade from selling Accolade's unauthorized Genesis cartridges. Now Accolade is free to make their own version of Genesis cartridges without a license from Sega. This may mark the beginning of the end for the video game companies' dominance of the software side of their business. About time, too. Many game companies are cheering, but the war may have been won just as the battlefield moves to CD-ROM. And the Bandito predicts they'll start fighting all over again...

•AC•

PSST!

Do you know of any rumors, gossip, scuttlebutt, or just plain dirt? If so, become a professional tattle-tale and pass these tidbits on to:

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Babylon 5

An interview with the show's creators and a look at the Video Toaster's role in production.

by Les Paul Robley

Valencia-based Foundation Imaging is one of the first effects companies to make extensive use of the *Video Toaster* version 2.0's spectacular 3D rendering. Helmed by visual effects director Ron Thornton, a veteran of *The Addams Family*, *Highlander II*, and *Dr. Who*, Foundation is using the Video Toaster almost exclusively to create outter space effects for the upcoming *Babylon 5* sci-fi television pilot. Thornton's innovation was to couple the versatile 3D graphics rendering capabilities of version 2.0 to a network of low-cost Amiga 2000s as output devices, to bring stunning high-quality computer graphic imaging (CGI) within the grasp of low-budget productions, such as *Babylon 5*.

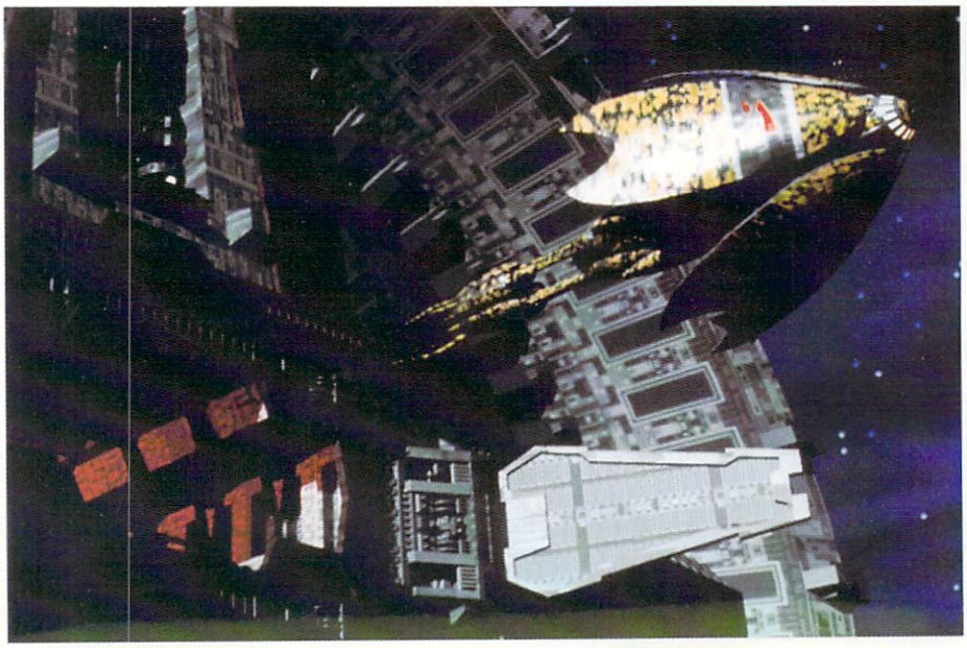
Babylon 5 is named after a space station orbiting a planet that has become a United Nations of inter-galactic intrigue. "This Casablanca in space is primarily a mystery story set in an artificial environment modeled after the old L-5 concept of the 60's," says computer imaging director Paul Beigle-Bryant. "L-1 was the first of a series of *2001*-like space stations that ended with L-5: a long cylinder (not unlike Arthur C. Clarke's conception of *Rama*) which is spun to provide artificial gravity, in the center of which are trees, lakes, and grass.

Thornton, an Englishman, began experimenting with the Toaster in 1990, producing video images for composer Todd Rundgren, which brought him into contact with NewTek programmer Allen Hastings. "Then it was still very much in its early stages," admits Thornton. "It all would have been difficult to produce a show with it." But Hastings improved the Toaster's capability with input from Thornton. "It's an astonishingly brilliant 3D program, " says Thornton of the Toaster 2.0. "Hastings has put in nearly everything we asked for. Some capabilities have been pretty wild and esoteric. He's a fan of this type of genre—he really wants to make it work."

Thornton partnered with Paul Beigle-Bryant last March to open the doors of Foundation Imaging, when *Babylon 5* got the green light from Warner Bros. "His knowledge is in creating custom networks," says Thornton. "Using standard desktop computers we render images as good as anything made off of a quarter-million dollars worth of equipment. You'd spend more than our entire effects budget on *Babylon 5*, which is $250,000, for one of those machines."

Thornton and Bryant are quick to point out that their company is not limited to producing CGI. "You can never use just one tool. You have to stay open-minded. But *Babylon 5* just stank of CG. It could easily be done. They were fairly reluctant at first to try it. I did some tests and they loved it. If you bid the job as a model, it came to a crew of six working six weeks, plus materials, just to build this humongous space station. I did it CG myself in two weeks," says Thornton.

But how does their work compare to previous computer-generated space environments, such as Digital Productions' simulations for *The Last Starfighter*, a CGI ground-breaker in 1984, with images rendered by a $15 million Cray X-MP super computer?



"You have to be careful about making that comparison," Bryant points out. "The level of technology they were using versus our current level of technology is like comparing apples and oranges. The kind of processing power we have today in leading edge desktop systems doesn't get anymore powerful than this. I'm quite sure that if you actually added up the amount of processing power, memory and advances in rendering algorithms that have been made over those ten years, you can say that today's system is actually more powerful overall than the Cray. *The Last Starfighter* was something for its time. We have vastly better tools than they had, at a fraction of the price."

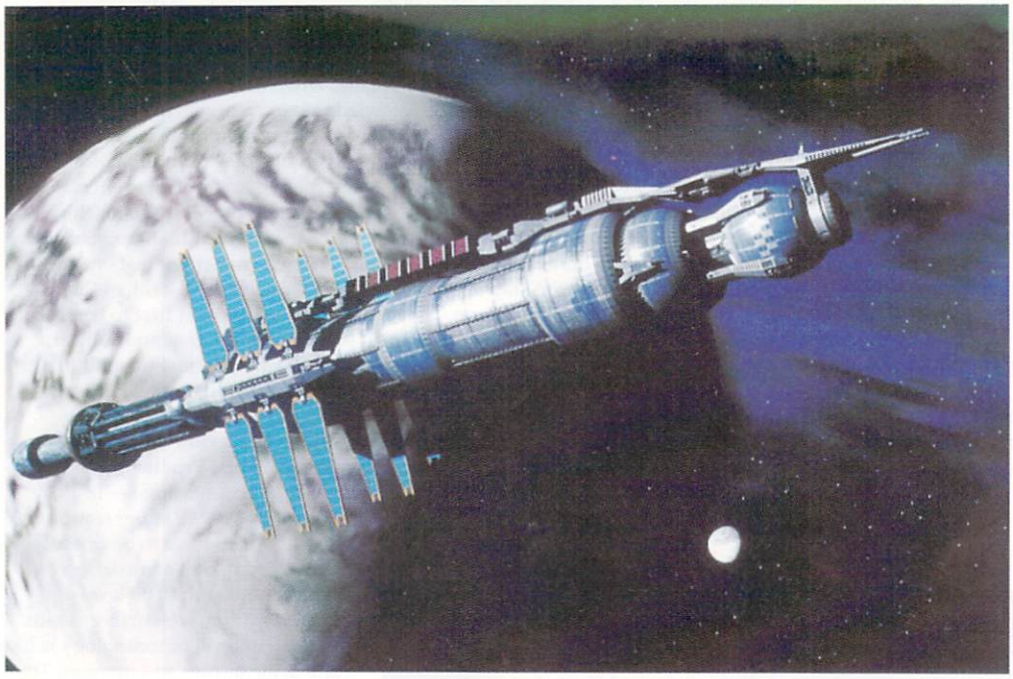
Foundation Imaging is producing 80 shots for the pilot of Babylon 5, estimated by Thornton at about one-forth the cost of filming effect with conventional means as on *Star Trek: The Next Generation*. "We're

doing at least $1 million worth of effects," he insists. "Taking into account the complexity of the ambitious shots we're planing, they would almost be impossible to do by traditional means. We're not doing it to show off. We're doing it to allow the show's creator freedom to come up with unusual ideas."

Foundation employs more people in the model shop to produce two shots than there are in the computer area to produce the rest of the show's effects. " It's very satisfying, once you've sent your scene to be rendered, to see it come back (in a matter of hours) fully comped," admits Thornton. "You don't have to do your model passes, go to dailies, pick a take, go to the optical department, pull mattes off it, do line-up, wedge tests, etc. It's very archaic in a way that people still use that technique for television."

A Typical Shot

Preliminary work begins with the script and storyboard. Once a creative approach is agreed upon, physical production can commence with stage one—the drafting operation. Wireframe models of the ships are made using the Video Toaster's *Lightwave 3D* program, manipulating the subjects in real-time so that perspective and orthogonal views can be previewed and modified.



Interactive translation, rotation, and scaling of objects can be adjusted with the supplied mouse. Lightwave 3D also permits the creation of detailed storyboards.

Surface detail is added by mapping polygons, the minimum units of detail used by the computer to remember surfaces. When the beautiful organically shaped Vorlon Mothership in *Babylon 5* decelerates, a huge umbrella-like shield is deployed, analogous to the giant blossoming petals of a flower. The inside blue texture is animated as thrusters open and close and little jets of flame spit out. To achieve this effect, Thornton created several versions of the model. "First, a key version is constructed; then we create metamorphosed targets. You undergo a point-to-point morph, so that the points or edges of polygons move from their original positions in the key model to the positions of the morphed targets."

Next, textures are added. Each surface is named according to the axis it faces, thus determining the kind of detail needed. "For example, if there is a decal in a certain area of the ship, then you must make sure it is named differently from the rest of the polygons," explains Thornton. "When creating a list of surfaces on the model, you begin assigning textures to the just like painting-by-numbers." The yellow and black spottiness found on the organic Vorlon ships is generated by the Toaster using a random fractal pattern.

Much computer art of the past carried with it a surreal cleanliness—the new pristine characteristics of CGI found in earlier films like *Tron* and *The Last Starfighter*. Computers tend to render objects with a kind of sterile perfection. To counter this look, Foundation Imaging uses Toaster techniques to dent ships, place fuel stains, burns and carbon scoring on engine exteriors in an effort to create the well-used, worn look that characterized the spacecraft in *Star Wars* and *Alien*. Textural subtleties like dirty mattes can be overlaid on the surface just as one would dirty up a miniature with an oil brush. A second- or third-image matte can be placed on top of this to simulate specularity. "The technology has been around for a long time," Thornton admits. "We're not really using anything hugely new, just using it in a different way."

Backgrounds are created as separate objects for the ships to pass in front. For star fields, single-point polygons or white dots are generated randomly inside a sphere, encompassing the entire illusionary stage encircling the computer model of *Babylon 5* and the planet around which it is orbiting. A nebula can be a simple cloud with a painted texture mapped onto it. Even an actual constellation sky map could be inserted for an accurate representational view of the night sky as seen from the Earth, if required.

"Essentially speaking, what you have is a fully equipped production studio inside you monitor," offers Bryant. "All these facilities are inside as well. Our set for *Babylon 5*, electronically speaking, is five kilometers across. The space station as been scaled a half kilometer. The universe that encircles it is a five-kilometer boundary. You can move lights or objects anywhere within that space."

The individual elements are loaded into the layout are similar to bringing miniatures and lights onto a sound stage. In effect, the programmer becomes a "mathematical cinematographer," with the computer's abstract version of "paint by numbers."

At which angle will the lights be placed? To answer this question, one must consider the texture of each object, as well as the position of the sun in relation to the planet and ship. Metallic surfaces reflect light onto other objects and are composed of highlights. Available light types include distant (directional) sources like the sun with highly parallel light beams, point sources with variable intensity fall-off, spotlights with adjustable cone angles and soft edges, or multiple colored light sources with gels and animated flickering intensities.

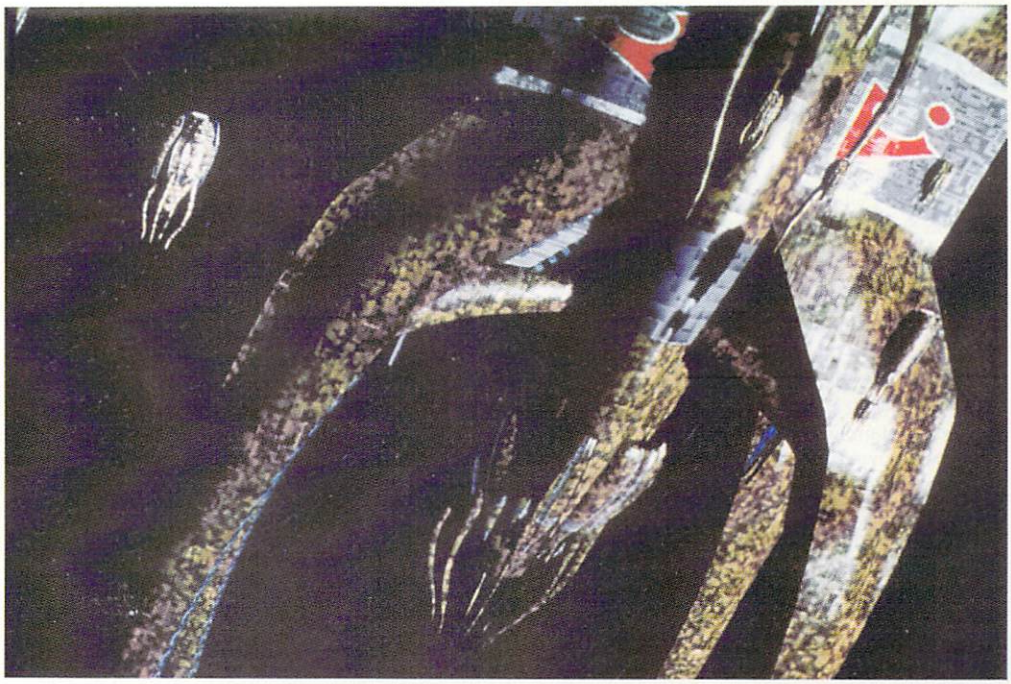
"Once the cone angle is defined, you can position your camera in the middle of the light, as if it were invisible, to see exactly where the light is looking if you want to illuminate a particular spot and track it," says Thornton. "For harsh sunlight in space, you would use a distant light source creating parallel beams across the entire universe inside the machine. No matter how much you move in space, the angle of light will never change. As the object turns, the shadows will change over it. You could synthesize movement of the sun for a speedy time-lapse effect by changing the angle to create an elongation of shadows, but that's unrealistic." (In NASA shots, one never sees the sun traverse over the space shuttle. By the same token, an eclipse might be arranged by passing the ship into the planet's shadow.)

At this stage, keyframes are rendered to see how the finished product will look, so lights can be moved and ambient levels adjusted. This process is similar to exposure wedging a normal miniature shot.

Whether or not objects will cast shadows must be specified at this juncture. The computer tries to simulate reality, so when an object is lit, one must decide if the background should carry its shadow. Naturally, a planet thousands of miles away would not cast a shadow on a starfield. But it would on a ship passing its terminator. The Toaster allows for accurate, ray-traced shadows, including adjustable self-casting and receiving shadow options.

"It's very expensive to create shadows in terms of time," says Thornton. "If you render a frame without shadows, it will take only five minutes. Our shadows tend to go black with no ambient light levels—harsh lighting like in *2001*. In *The Last Starfighter*, the creators didn't trace one shadow in the whole show. We're tracing shadows on every single shot."

Another important benefit computer generated images is the crisp, first-generation look arising from special effects composited straight to D1. By keeping everything within the digital domain until the last minute, there is no image degradation or generation loss. The flexibility of computer simulation permits any number of elements to appear simultaneously in a scene without the need for complex matting. When one films miniatures by traditional methods, the shots become more complicated optically as elements are added. One shot in *The Gathering*, the pilot for *Babylon 5*, has 200 ships on screen at one time, easily beating the previous record for motion-control elements in a composite shot held by *Return of the Jedi*. This offers unlimited possibilities to television writers. If you want an entire fleet to attack a station, feel free.



Backgrounds

CGI works particularly well in a space vehicle like *Babylon 5*, since one doesn't have to worry about a center of gravity in space. Miniatures always have that problem due to external means, such as a pylon, holding them up. In *2001: A Space Odyssey*, Kubrick suspended the actors and miniatures over the camera in order to simulate a weightless environment, as well as to hide the wires with their bodies. Toaster users need not concern themselves with this constraint and can operate outside the bounds of gravity to tell their story—which is definitely in keeping with the realities for hardware in outer space.

Since the camera and lights can track any object during a scene, the camera, lights, and objects are each assigned channels for a particular x-y movement. This can relate to zoom, dolly, pan, tilt, etc. Keyframes are assigned for a particular position on screen. As with motion control, one must always be aware that the linear or spline-based curve continuity be correct for the intended path of motion. Overshoots are possible if a curve is too steep. Double keyframes or ease-ins and ease-outs can be added to prevent this, but the best method is to load the path in the layout and observe where the wire-framed objects travel.

"You can actually connect backgrounds to spaceships if you want, or any other object, which normal mo-co can't do," observes Thornton. Objects with moving parts such as claws or spinning antennae naturally get more complex. To create the shot of a "vortex gateway" with lights flashing on and off, one required envelope animations equivalent to 250 channels of motion control. Each had to have its own motion graph, really complicating matters.

Motion

The movements of the camera and performers—in this case the ships, lasers, exhaust, stars, and planets—can now be rehearsed and defined with the precision of a cel animator's exposure sheet, and with great deal more fluidity besides. Again, all this is accomplished in real-time interactive mode so there's plenty of visual feedback for the technical director to see the action as it's being created, and to take it through all the nuances and subtleties of performance found in real-life character.

At this stage final decisions concerning motion are made. It also becomes possible to record these wireframe movements on tape, enabling them to be edited into a rough assembly for creating sound effects. Because one is dealing with objects that don't physically exist outside the realm of the computer, all this can be accomplished very early in the production process, before principal live-action photography actually begins. This capability is usually unheard of with special effects sequences generated by traditional mechanical or optical means. Each step can run in parallel as well, such is the beauty and leeway of computer animation.

Rendering

Once the lighting and movement have been approved, after rendering one or two frames throughout the course of the shot, then the information is submitted to step four: the rendering stage. *Foundation's* render engine, as it is commonly referred to, lies within an industry-standard climate-controlled environment so that its computers don't overheat from being in continuous operation. An array of central processing units is each connected via network to a central server—a massively large hard drive with 5GB (thousand millions) of storage and 64MB of memory. Foundation currently has an array of eight standard Amiga computers with high-speed 68040 processors and 32MB of system memory—all for the unattended rendering of frames in photorealistic color via parallel processing. Each Amiga carries a segment of a scene and all render that scene at the same time. Depending upon the complexity of the shot, the computers take five hours to render an average 400-frame scene of

about 13.5 seconds' duration. The total time required for one person to make any given shot is about one or twodays for modeling, 45 minutes to program and put together the scene, and five hours to render it.

"We have more than enough power to do the show," adds Bryant. "We can use just eight Amigas because that's all we need. We have space to add three more bays which would increase the processing power significantly.

"Should power ever fail, an uninterruptable power supply triggers an automated sequence in the computer which safeguards all files presently loaded. After 10 minutes it shuts itself down. It also conditions the power perfectly against dips and spikes caused by people in adjacent rooms using drills and saws. Ninety-five percent of all power interrupts last for five seconds or less, which is more than enough time to bring the entire system down. After 10 minutes the server senses what's wrong with the UPS, it disconnects from all systems currently active, closes all its files, and shuts itself down. When power returns, the server comes back on and all the engines running software will pickup from where they left off. It's virtually indestructible. Everyday the entire system is backed up on 2.5GB DAT tape."

Finally, the composite reaches the stage where it is transferred to video. There are several means of outputting this information, depending on what format the end product is required. There is even support for a letterboxed aspect ratio for cinematic or HDTV scene design. "We do our move tests on recordable laser disk," says Thornton. "Then we can dump directly to tape from the LVR. Or we can change the file format of the final RGB frames, make a tape backup and reinstate them on an Abacus digital disc recorder, then output it as D1 which is probably about the best quality you can get.

"At the moment, the end result is going straight to video because that's what we've been required to do. But there's no problem transferring to film. *The Lawnmower Man* was done to the same resolution as we're doing B-5, which is only TV-res. But then it went through the Gemini process at the Post Group; that anti-aliased it again and put it onto film, and the results were good." *The Lawnmower Man* was cartoony but it was designed to look that way. Like *Tron*, its sterile look was posited as an artificial environment, make up of the cold, voltaic impulses existing inside a computer.

"I wouldn't suggest using it in a major film where you're doing stuff to the standard of *Terminator* 2. You could certainly deal with it in terms of lower-budgeted movies and create effects that would probably be as good as if you were using standard 35mm."

Another benefit of electronic compositing is that there are no matte lines. "We're edge detectors. When we look at things we detect the edge first, then make up our mind what it is from that. When you see a matte line, it's really obvious even though it may not be that [pronounced]. It becomes more obvious because of our means of border detection."

Other effects Foundation is designing with the Toaster call for hovering semi-autonomous recorders with cameras which follow passengers around the Babylon 5 station *a la* Big Brother Is Watching. Thornton planned to combine the live action 35mm film with their CGI in post-production at the Post Group.

"We have to render them a matte on an alpha channel making it a 32-bit image. 24-bit images use the 16.8 million colors that the Toaster is capable of generating. The extra 8 bits is a transparency map [basically a hold-out matte] which is also anti-aliased so you don't get a matte line with it. It's absolutely perfectly registered to the pixel. It's never off." As opposed to being pin-registered for steadiness in a 35mm motion picture camera, it's pixel-registered here.

Explosions

Another interesting innovative concept deals with Foundation's treatment of explosions in space. Typically, live-action pyro is shot high speed and the approved explosions are scanned or "digitized" into the computer from the original negative via the frame grabber. *Star Wars* explosions have now become cliches in their own right, and the question: "What is reality in space?" is arguable when considering Hollywoods visual anomalies (i.e. hearing sound in a vacuum, flame exhausts, moving starfields, etc.).

"In the past, explosions in space have all been hokey and unrealistic because you don't flame in a vacuum," says Bryant. "There are no thermal dynamics in space—the bits come straight at you." Foundation is making completely digital explosions—weightless ones designed to look exactly like NASA shots of exploding bolts when the stages of a rocket separate. "There's a very small flash and then all the tiny debris flies straight out."

Conclusion

Notes Thornton: "I prefer doing technical effects that have a certain amount of realism. Everybody out there who's doing computer stuff is doing floating chrome blobs, checkered landscapes—stuff like that looks like CG. After a while it gets old. It suffers from overkill and starts to lose its punch. We're not doing the typical flying and zooming in and out that you can do with CG because it pulls [viewers] away from the general pacing of the show."

Adds Bryant: "Essentially, we're tying to model reality. We don't want people to look at it and say 'that's very nice CG,' because then we've lost it completely. We've been contracted to produce the visual image—not to do it CG."

With this in mind, Thornton and Bryant are using traditional miniatures for certain scenes where it would be difficult and impractical to incorporate computer graphics. "You can't discount using miniatures for certain areas where you've got to use them," concludes Thornton. "There's sometimes no substitute for shooting high speed." Foundation has constructed a round working miniature to film the natural tree and grass environment found in the station's center. "The amount of data involved in a tree is huge (very poly-intensive). Take a handful of trees and you've got the same amount of polygons as in the Babylon 5 space station."

In terms of equipment, Thornton claims they are not doing anything particularity unusual. "We're just putting it together in an extraordinary way and taking a very different design philosophy. First and foremost is our design sense."

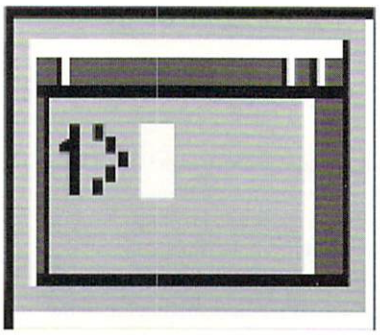
According to Bryant, "The fact that our overheads are significantly lower means we can produce very competitive pricing. But at no time will we say we will do it because we can do it cheaper than anyone else. We do it because it's the best way to do it."

"Usually when people are looking for just the cheapest alternative without regards to quality, they're not the sort of clients we want. We want to deal with people who really want to have a good job; obviously, if they save money at the same time, that's great!" echoes Thornton.

An overriding consideration in every production is to make things affordable. Science fiction priced itself out to the television market in the '70s and '80s with expensive, non-thought-provoking shows like *Buck Rogers* and *Battlestar Galactica*. People insisted there was no room for sci-fi on TV, yet *Star Trek* has been on since its cancellation, sometimes two or three times a day. With CGI, producers can now afford to make effects shows at a price that won't break studios' budgets. Hopefully, *Babylon 5* will lead the resurgence of a big boom in science fiction of television. As part of that resurgence, the Video Toaster may revolutionize the visual effects industry for TV.

•AC•

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cli directory

by Keith Cameron

Shell Graphics

Last month we looked at several editors which can help you make your Amiga a more efficient machine. This month, we will look at another editor, as well as some other programs which can help you use graphics on your Amiga.

Have you ever needed to make a hard copy of what appears on your screen? As a writing teacher, I have. At the beginning of each year, I usually introduce my students to using a word processor. Since I have more than 20 students per class but only four computers, I have found the best way to do this is to print a copy of the screen that appears on the word processing program we will use to do our writing assignments. Then, instead of crowding around our overused computers, I can give each student a printout and discuss the ruler and other items of the word processor before we ever begin.

GRAPHICDUMP, found in the Tools directory of the Extras2.0 disk, will send whatever is on the front screen of your computer to the printer. About ten seconds will elapse from the time you execute the command until printing starts. This allows you time to rearrange your screen if you wish. In fact, when doing a graphicdump of a screen that has pull-down menus, this gives you time to return to that screen, pull-down a menu to expose the items in the menu, and hold it to make a graphicdump of all the items in the menu. Be sure, though, that you continue to hold the mouse button down until the entire document is printed, for GRAPHICDUMP will print what is on the screen at that moment. If you release the mouse button and the items disappear from the screen, they also will not be printed. In fact, when playing around with this, I repeatedly pulled-down the "File" menu of a program I was making a graphicdump for and released it. It had alternating lines printed, with alternating items missing from it. Interesting!

Several arguments are available to make the printout the size you want. If you want the screen to be 1/4 the total width allowed by the printer, you should specify the TINY option. The SMALL option will make it 1/2 the total width, MEDIUM will make it 3/4, and LARGE will make it the full width. The height will automatically be adjusted so as to be proportionate to the width. An example of a typical command line follows:

```
GRAPHICDUMP MEDIUM <RETURN>
```

If none of these options are suitable, you can choose the exact size you want. To do this, specify the number of dots wide you wish the printout to be by the number of dots high. Here is an example:

```
GRAPHICDUMP 200:100 <RETURN>
```

This will produce a fairly small printout.

To view pictures on the Amiga in the past usually meant acquiring a shareware or commercial program of some sort. On version 2.04, DISPLAY can be used to view graphics saved in IFF ILBM format. It is found in the Utilities directory of the Systems disk. There are a number of options available for use with this command. It is well worth knowing some of them.

First, though, let's begin with some basics. On the simplest level, you can specify a single picture to view using DISPLAY. To do so, simply type the following on the command line:

```
DISPLAY PICTURE <RETURN>
```

If you have two pictures you want to view, simply list them one after another, like this:

```
DISPLAY PICTURE1 PICTURE2 <RETURN>
```

If you use a set of pictures frequently in your work, you may want to create a script for them. To do so, simply use a text editor to name the pictures you want to include. Then you can simply name

that script on the command line, using the FROM argument.

```
DISPLAY FROM SCRIPT <RETURN>
```

When more than one picture is used, you can advance pictures by pressing Ctrl-C.

There are more options, though. For example, you can print pictures if you want. According to my manual, here's what you do. First, on the command line, you need to type the following:

```
DISPLAY OPT P <RETURN>
```

Then, when the picture is displayed, you can press Ctrl-P and the picture will be sent to the printer. Actually, I have found that the "OPT P" switch is not needed in this situation. I simply press Ctrl-P when I want a picture, regardless of whether the OPT switch has been executed or not, and out comes the picture on my printer.

If you want to loop your pictures in a script so that they continuously cycle without ending, use the L option, like this.

```
DISPLAY FROM SCRIPT OPT L <RETURN>
```

This would be especially beneficial if your Amiga is on display for long periods of time. As people pass by, the pictures continue advancing. When the last one is shown, the cycle begins anew. For this type of setup, though, you really should use this option along with a time specification. You can designate the number of seconds that each picture will remain on the screen before advancing to the next picture. Here's how you do it:

```
DISPLAY FROM SCRIPT OPT LT=10 <RETURN>
```

This will allow each picture to remain on screen for 10 seconds.

Be sure, though, that you continue to hold the mouse button down until the entire document is printed, for GRAPHICDUMP will print what is on the screen at that moment.

If you have a lot of pictures you want to print, include them in a script and then type

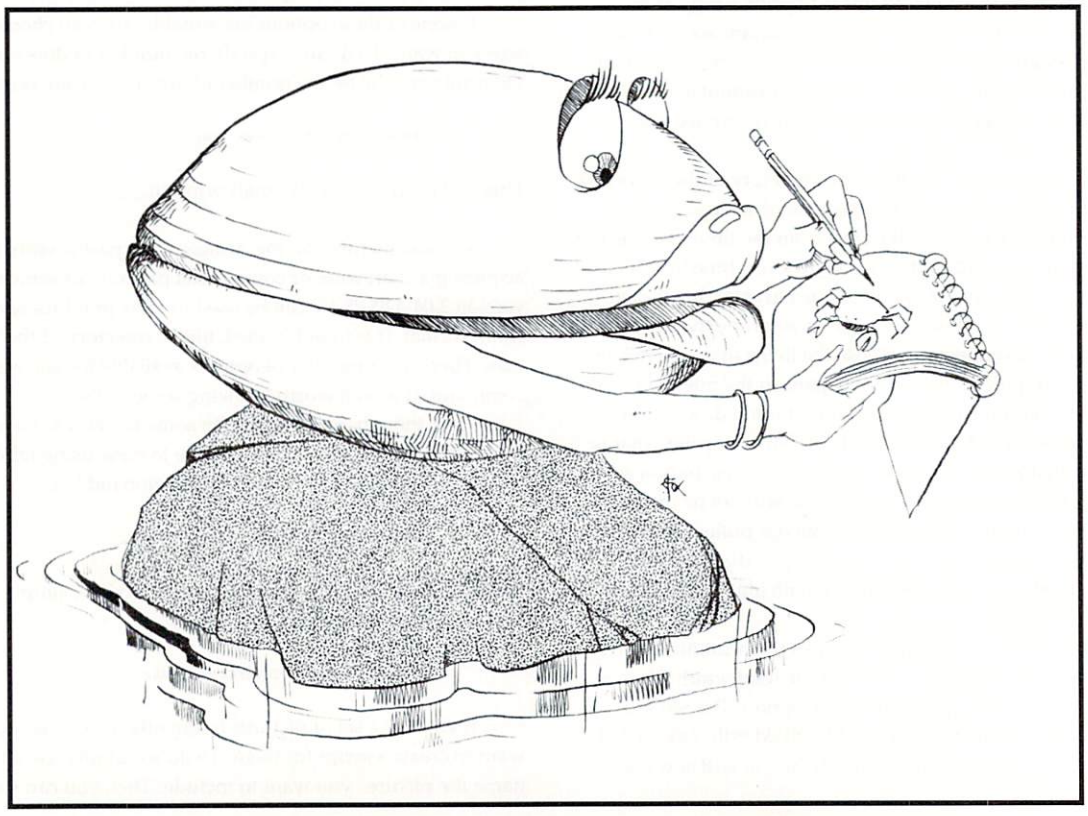
```
DISPLAY FROM SCRIPT OPT P <RETURN>
```

and you can print them one at a time as they appear.

If you want to use your Amiga much like a slide projector, then you should type

```
DISPLAY FROM SCRIPT OPT M <RETURN>
```

Doing this will give you mouse control over the advancement



of pictures. The selection (left) button will advance to the next picture while the menu (right) button will return to the previous picture. There are a few more options, which are apparent if you examine the format/template. For most users, though, these are the ones that will be most useful.

The final program we will look at today works in connection with the previous two, at least to some degree. It is PRINTERGFX, an editor found in the Prefs directory of the Systems disk. As its name somewhat implies, it concerns the printing of graphics.

When the PRINTERGFX window opens, you will see several gadgets, most of which may be unfamiliar to you. A discussion of all of these is impossible in a short column, but we can highlight some of the more important ones. Since relatively few people use color printers, at least from what I've experienced, I won't deal at all with features involving color.

At the top center of the window is a gadget called Smoothing. This feature attempts to smooth, or make less jagged, any diagonally drawn lines. Depending on your printer, printer devices, and other items, this gadget could cause your graphics to be printed more slowly. You decide whether the clearer print justifies the loss of speed.

Just to the right of the Smoothing gadget is the Left Offset. This feature determines how far from the left margin you want your graphic(s) to be printed. The measurement is determined in inches. An alternative to this gadget is just below it, called Center Picture. I prefer this feature, for it centers the graphic on the printed page. Center Picture and Left Offset can not be used simultaneously: you must choose one or the other.

In the left center of the window are several gadgets lined up vertically. Of these, Dithering and Shade refer to color aspects, so I will bypass them and briefly outline the other three.

Scaling changes the size of an image, and this feature works in connection with the Limits setting just to the right. Image lets you decide whether you wish to print a positive image of your graphic or a negative image, much like a negative of a photograph. Aspect determines whether your picture is printed "tall" or "wide," to borrow from word processing language.

Since PRINTERGFX is really an editor, that means that you can save your settings as we did last month with the other editors. Then, you can call up each setting depending on the type of setting you need. Say, for example, that you set the Center and Smoothing gadgets and save them to a file called "PrinterGFX.dump" which you want to use whenever you want a graphicdump of a window. From your command line, you would type

```
PRINTERGFX PREFS/PRESETS/PRINTERGFX.DUMP USE <RETURN>
```

Remember that using the USE switch prevents the editor itself from opening, thereby saving time and effort.

If you decide the above file is one you always want to use, you may want to save it so that it's settings are always in force. To do so, you would type the following:

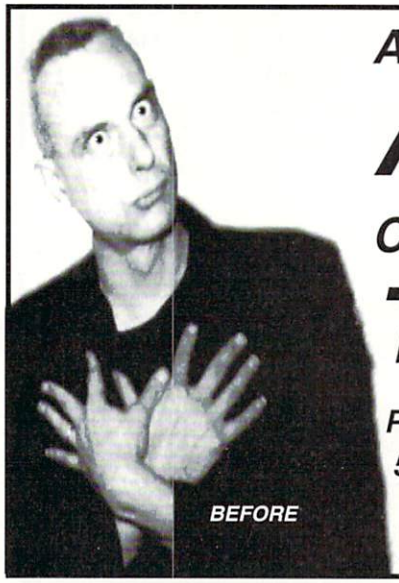
```
PRINTERGFX PREFS/PRESETS/PRINTERGFX.DUMP SAVE <RETURN>
```

Once again, without opening the PRINTERGFX window, this file will be saved for permanent use; that is, until you replace it by saving another file. Of course, it goes without saying that all of these settings must be set originally from within the window itself.

If you've never done much work with graphics before, this will give you a good start. The best way to become familiar is to just dive in and play around. Experiment with different settings and different graphics until you discover what you like. I think you'll find that graphics can be fun and rewarding.

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DIVERSIONS

International Sports Challenge

Rob Hays

Let's face facts. The chances that any of us will have the opportunity to compete in the next Summer Olympics are somewhere between slim and none. However, thanks to *International Sports Challenge* from Empire Software, we can compete in six different Olympic events, all while sitting in front of our Amigas.

The games begin with a question to be answered from the manual. These concern training schedules for one of the four athletes profiled. These are also the athletes that up to four human players choose from in order to compete. The computer supplies opponents to round out the competitions.

You can choose to compete in any single, or any combination of events, or go for the gold and compete in them all. If this is your choice, you'll begin at the marathon, then proceed through each of the other sports. The marathon event requires the most strategy of any of the included sports. It is also the most complex scenario, and takes the longest to complete.

The main marathon screen shows a scrolling side view of your runner and his immediate surroundings. This is a five-level, parallax display, with foreground and background levels all smoothly scrolling. Changing scenery and spectators helps relieve the boredom that can set in on a two-hour plus run. There are five subsidiary screens in addition to the main running screen. Each of these provides information on subjects such as split times, weather, a route map for planning, and the runner control screen. This is where you can adjust your runner's effort and rhythm, and monitor his fatigue and fluid levels.

Each event, except the marathon and show-jumping, consists of several individual competitions. The diving event has a total of 16 different dives. The swimming competition contains four different strokes over three distances. Cycling is divided into sprint and pursuit type races, and shooting consists of trap, skeet, and two other types of target shooting. Many of the events also allow you to compete at several different skill levels.

Let's face another fact. Other than strategy and eye-hand coordination, in sports there is very little that can be simulated on a computer. While this is also true of *International Sports Challenge*, I have to give Empire high marks for their control details. In the swimming events, you must match side-to-side movements of the joystick to a bar gauge on the screen. Different swimming strokes require a different rhythm of movements, and, when a beating heart appears in the bar graph, you have to press the fire button to breathe. Pressing the button when the heart isn't visible will result in your swimmer getting a mouthful of water. The other events have similar constraints to remember.

The game is supplied on three floppy disks, and has a rather strange set of requirements. It requires a joystick and Workbench 2.0, but won't run properly on accelerated Amigas. Although the disks can be copied, they cannot be installed onto a hard disk, and cannot be run from the Workbench, requiring the computer be booted from the game disk. In a typically British fashion, the game does not recognize any external floppy drives you have attached, but the video display is corrected for U.S. standards so that you can see all of the screens.

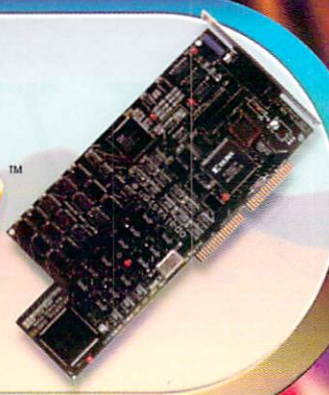
The 56-page spiral-bound manual includes short histories of the modeled sports, and their places in the modern summer Olympics. The graphics and animations throughout are nicely done. The things I disliked about this game were incompatibility with hard disks and accelerators, and the fact that the marathon is run in near real-time. This is probably done for consistency with the other events, but two hours watching a figure running is a bit much.

This may not be the ultimate sports simulation, but overall it deserves at least a bronze medal.

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"OpalVision is an amazing delight."
—Hank Tucker, Producer for Disney TV Animation

"The verdict was unanimous —*brilliant.*"
—Amiga Shopper Magazine

"OpalPaint is in my opinion the best paint program currently available in the United States for the Amiga."
—The Amiga-Video Journal (AVID)

The OpalVision Main Board

- A true 24-Bit frame buffer and display device with 16.8 million colors available for every pixel.
- Uncompromised, 24-Bit higher-than-broadcast-quality, crystal-clear images.
- Standard Amiga graphics and animations can appear in front of or behind OpalVision images on a pixel-by-pixel basis.
- Performs double-buffered 24-Bit and 15-Bit animation in medium and low resolution modes and 8-Bit double-buffered animation in all resolutions.
- VLSI graphics coprocessor enables resolution changes, stencil modes, a host of transition effects and smooth scrolling between screens.
- "Palette-Mapped" design updates screen colors in real-time. Fade pictures in and out and change their palettes on the fly.
- Double buffered full 24-Bit, 15-Bit and 8-Bit true color modes, 24-Bit and 8-Bit palette-mapped display modes, Dual Playfield and Overlay Priority stencil modes.
- Priority mask definition specifies foreground/background areas in 24-Bit images.
- Microcode graphics processor for system control, priority switching, hardware scrolling and panning.
- 20ns video switch to freely mix Amiga and OpalVision graphics.
- Expansion connectors for available Framegrabber/Genlock and Scan-Rate Converter hardware modules.
- Expansion socket for the "Roaster Chip," a live video special effects processor.
- Automatically self-configures for NTSC or PAL operation.
- 24-Bit RGB output with video bandwidth >7 MHz. Equipped with 1.5 MB of display RAM.
- An internal card which operates in any Amiga computer with a video slot.

OpalPaint

Everyone is excited about OpalPaint. In fact, nearly everyone who's spent any time using it says it's the finest, most professional paint program on the Amiga. And with good reason. It's Fast. Real-time. Full 24-Bit. OpalPaint gives you complete control over OpalVision's 16.8 million color palette. Includes a full-range of drawing tools and an expandable library of image-processing modes with adjustable parameters, complete texture-mapping capabilities, transparency and color gradients, multiple work modes, nozzle brushes, pre-defined palettes and many other comprehensive tools. Unique and powerful features like real-world "Artist's tools" and paper types, multiple stencil types, virtual memory support and compatibility with the pressure-sensitive Wacom drawing tablet provide a level of support for artistic creativity never before available on the Amiga.

OpalAnimMATE

Our powerful new animation player lets you run OpalVision animations at rates of up to 60 frames per second. It works in 8, 12, 15, 18 and 24-Bit modes and features selectable screen sizes from 32 x 20 to 768 x 286 pixels. Features an easy Workbench interface, dynamic DMA allocation for best frame rates on slower machines and will play animations directly from a hard drive. Our delta compression feature creates small files and fast playback rates. Create 16-million color animations using your favorite 3D rendering package and play them back through OpalVision!

Also included are Opal Presents!, an icon-driven presentation program, OpalVision Hot Key, a powerful and very useful image display utility and the world's first 24-Bit game, King of Karate.

Amiga Developers Create OpalVision Software

OpalVision displays all standard IFF 24 images and is instantly compatible with virtually all Amiga 24-Bit software. At the same time, all of the important Amiga developers are creating new versions of their programs which directly support OpalVision-specific, advanced features. Here are just some of the titles that are already available or soon to be released:

Activa International - Real 3D
ASDG - Art Department Professional and Morph Plus
Adspec Programming - Aladdin 4D
Black Belt Systems - ImageMaster
SCALA - MultiMedia 200 and InfoChannel
GVP - Image FX and Cine Morph
Octree Software - Caligari 24
RGB Computer & Video - AmiLink Video Editing Products
Amazing Computers - Transporter single frame recording software
Texture City - Texture City 24-Bit image libraries
TecSoft - TV Paint
Progressive Peripherals and Software - 3D Professional

OpalVision also works with the Amiga 4000 and the AGA chipset!

The OpalVision Main Board is the core of a complete video system.

Enhancement Modules are on the way which add exceptional graphic and video features to the OpalVision Main Board. Create a complete video production studio by adding some or all of the OpalVision Expansion modules. The modules connect directly to the Main Board without tying up Amiga slots.

Frame Grabber + Genlock Module

24-Bit real-time framegrabbing and better-than-broadcast-quality genlocking with S-Video, RGB and composite inputs and outputs. Real-Time video effects, transitions and color processing.

Quad-input Production Switcher

Complete video switching capabilities. Includes four S-VHS, four composite and one RGB input. Three outputs: Composite, S-Video and RGB. Combine two live video sources, 24-Bit OpalVision and Amiga-generated graphics.

OpalVision Scan-Rate Converter

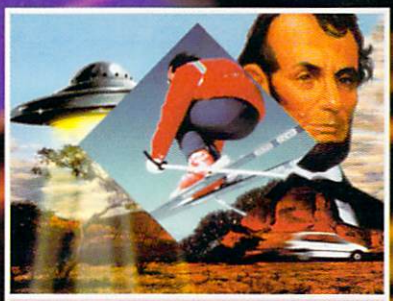
Perfect for desktop publishing and graphic arts applications. Generates flicker-free 24-Bit and Amiga graphics. Can also be used as a separate 24-Bit frame store for multimedia applications.

OpalVision Roaster Chip

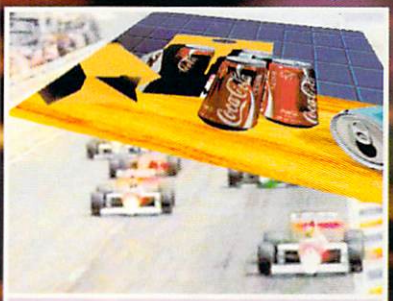
Amazing, complex Digital Video Effects. Real-time processing of live video. "Picture-in-Picture" capability. Includes pre-made effects and provides for the creation of custom effects.



OpalAnimMATE offers real-time playback of animations created by ray-tracers, landscape generators, morphers and all other 24-Bit software.



OPAL PRESENTS! includes numerous built-in transitions for image sequencing and presentation. It also triggers CLI and AREXX commands.



The OpalVision Roaster Chip transforms any video signal in real time. A wide variety of complex DVE's are included, or create your own!

Created by:
Opal Tech
Sydney, Australia

Manufactured and Distributed by:
Centaur Development
P.O. Box 4400
Redondo Beach, CA 90278

Phone: (310) 542-2226
FAX: (310) 542-9998
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1-800-621-2202

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Circle 147 on Reader Service card.

Bill's Tomato Game

What is a poor tomato to do? After escaping a trip to the local farmer's market, Terry Tomato and his red-juiced girlfriend, Tracy, bounce their way back into the tomato patch they called home. But peace and quiet were not to be theirs as Sammy the Squirrel snatches the bright-red Tracy and scampers back up a very unusual vine. Any ordinary tomato would be at a loss, but Terry is anything but ordinary. With an ability unlike your garden variety tomato, Terry can bounce his way to save his beloved.

Terry bounces up Sammy's vine to encounter leaves, insects, and ten magic worlds. In each magic world, Terry encounters ten different puzzles to be solved. The object of each is to cross the puzzel and make it to the conveyor belt.

The only help Terry has along the way is a very short list of tools. Fans are used to blow the bouncing Terry along his route. Trampolines allow the tenacious tomato to continue his bounce past harms way. Jeremy Jack-in-the-box, as well as a few of his brothers, will give Terry the added lift he needs at just the right time. Gift-wrapped blocking boxes allow Terry to stop his progress at just the right time. Each puzzel has a different number of tools, not every puzzle has access to each of these tools, and not every puzzel requires the use of all the tools available.

A few short hours with this program—yeah *Bill's Tomato Game* can easily soak up hours of concentration—sharpens your skills at problem solving. The interesting part of these puzzels is that they are small, neat solutions that require the proper placement of your tools and, in some cases, the accurate timing of your bounce. Sometimes you must rely on blind luck to get your perishable hero through a difficult level.

Psygnosis is no stranger to the value of a good multilevel puzzel game. Their famous *Lemmings* has been transfered from its original Amiga format to almost every concievable game platform except the back of cereal boxes. Lemmings has won acclaims from almost everyone (including the 1991 AC Readers' Choice Awards) for the game that delivered a variety of different level puzzels with a similar set of tools for each solution.

Bill's Tomato Game is definetly not a Lemmings knock-off. Psygnosis has provided at least two other products to give Lemmings addicts additional playing time with their favorite little characters, *Oh No More Lemmings* and *Lemmings II Tribes* (please see the description in the CES article in this issue), which are almost certain to become best sellers in their own right.

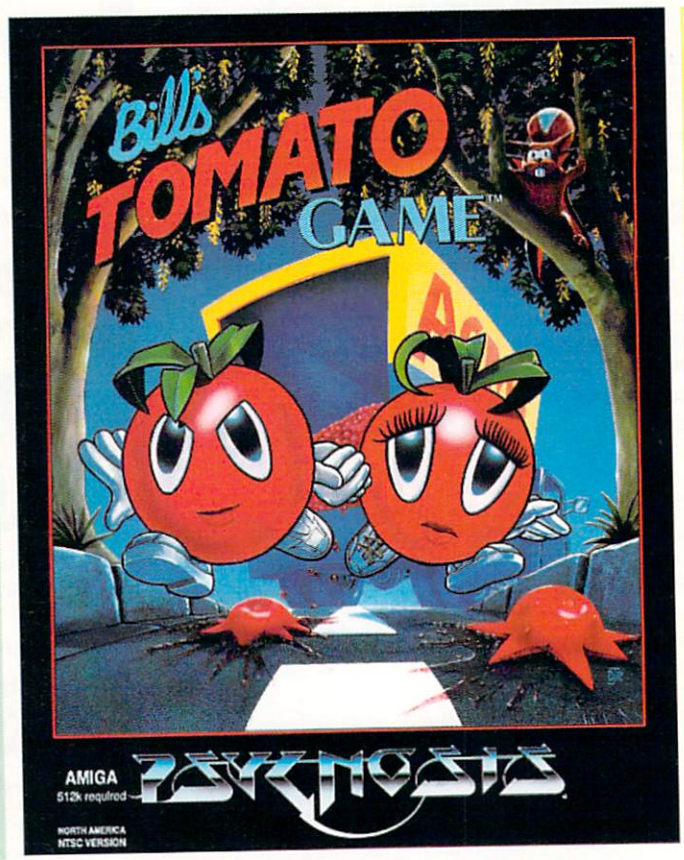
Bill's Tomato Game is a unique, and sometimes frustrating, problem solving journey. This in no way deminishes the game. A good puzzle needs to frustrate and then provide a few glimpses of hope to keep it interesting.

Interesting is a good word for Bill's Tomato Game. Its great sound effects and smooth animation make it a pleasure to play. The art is colorful, attractive, and provides a positive view as you ponder each puzzle.

The only downside could be the music. While the bright sound track is pleasant enough in the first few times it is played, it becomes a little draining when faced with a difficult level where all you want to do is get the crazy litlle bouncing BLT component across the screen. However, sound effects and music can each be turned of from the "radio" on the original menu screen.

Bill's Tomato Game is hard disk installable with off-disk copy protection. Don't lose the instruction book; the codes listed along the sides of the pages are necessary to get you started. At the end of each puzzle accomplished, you are given a password which will allow you to quit the game and restart at the level you left.

Is Bill's Tomato Game another runaway best seller? It is hard to say. Bill's Tomato Game is a bright, breezy, fun way to spend hours solving puzzles filled with colorful characters and fun saeound effects. It is a great game for quick minded adults and sophistacted children. However, after a session of Bill's Tomato Game, you may never look at spaghetti sauce the same way again.



Product Information

International Sports Challenge
Ready Soft, Inc.
30 Wrentham Court, Unit 2
Richmond Hill, Ontario
Canada L4B 1B9
(416) 731-4175
Inquiry #245

Bill's Tomato Game
Psygnosis
29 St. Mary's Court
Brookline, MA 02146
(617) 731-3553
Inquiry #246

CES W'93

The Winter Consumer Electronics Show '93 (Las Vegas, Nevada, January 7 through 10) once again attracted thousands of attendees to view hundreds of companies vying for notice of their newest products. CES has become a proving ground for new technology and the attention it will receive from the public.

One sure way to attract attention is to have a celebrity in your booth for autographs. Roger Clemens, the famous Boston Red Sox pitcher, also known as "The Rocket," was available from 11 a.m. until 2 p.m. at the Acclaim Entertainment Booth on Friday. He was there to promote Acclaim's newest video game for the cartridge market, **Roger Clemens' MVP Baseball**.

But not all celebrities are athletes. Kasparov, celebrated as the undefeated world chess champion, was on hand to sign autographs in the Saitek Industries Ltd. booth on Friday to support both their **Kasparov Travel Companion** chess computer and their *Kasparov RISC 2500* home model. However, when it is all over, it is the products that most attendees remember and this year there was a variety of computer and associated products to see.

The Commodore Booth

Commodore entered CES after a very dramatic several months. CBM had just introduced the **Amiga 600, 4000, and 1200**, as well as new operating systems, the new **AmigaVision Professional** release, and an upgrade card for the A3000T. The Commodore booth echoed these triumphs with the current product line of Amigas on display from CDTV's assorted products to the new Amiga 600 *Virtual Reality* or *RoboCop 3* retail packages.

One unannounced and undocumented attraction was an implementation of MPEG video compression being played in real time on the Amiga 4000. The coding was performed on a Sun workstation (requiring a great deal of time) with the final result being five minutes and 44 seconds of video (sound was not included) compressed into an amazingly small 51.5MB. An MPEG video decoder board was created for the video card slot of the Amiga 4000 and the Amiga played the video information back in real time. This was possible even as the Amiga performed other tasks and disk operations. Some minor pixelization was noted during the disk operations of other programs, but the effect was minimal.

The image was created in 352 x 240 pixels x 30 fps in 24-bit color. The actual display was 704 x 480 pixels x 30 fps due to the interlace ability of the MPEG chip CBM was using. The Bon Jovi music video *Blaze of Glory*, created for the movie *Young Guns II*, was used as the video backdrop and then genlocked into the Amiga 4000 display.

Aside from Commodore's new retail packages, they also publicized the new "Power Up" program. The program allows users who purchase an Amiga 4000-25/120 between January 1, 1993 and March 31, 1993, to receive directly from Commodore ASDG's *Art Department Professional*™ and Electronic Arts *DeluxePaint IV™ AGA*. The entire package lists for $2693.



Commodore's CES presence was highlighted by new consumer programs plus an arcade area supplied by American Laser Games.

The Amiga 1200 can also be purchased for $599 in the "Power Up" program and consumers receive SoftWood Inc.'s *Final Copy 1.3*™ and Electronic Arts DeluxePaint IV™ AGA from Commodore. This is a $600 savings off of the suggested list prices for the products individually.

Also in the CBM booth was St Claire Interactive Communications (*AC*, V8.1, p.96) who were demonstrating their wide variety of interactive kiosk systems. Great Valley Products demonstrated their remarkable **G-Lock** genlock which works on all models of Amigas. RGB Computer & Video showcased the **AmiLink/CI** (Consumer Industrial) video editing system which offers A/B roll editing, complete interface with the NewTek's Video Toaster, as well as control of up to six sources and one record Panasonic AG 1960.

Gold Disk provided hands-on demonstrations of **VideoDirector**, a videotape editing system with VCR-style controls to select and catalog "clips." Clips from multiple tapes can be arranged in any order and VideoDirector will control a camcorder and VCR to create a finished tape. To control most VCRs and camcorders, VideoDirector comes complete with a Smart Cable serial port interface.

The Miracle Piano Teaching System™ from Software Toolworks, Inc. was also on display. Introduced for the Amiga in 1991, the system has 1,000 piano lessons and a remarkable success rate in teaching all ages how to play the piano. And American Laser Games (And furthermore, p.96) provided a display of their latest arcade games to give attendees a chance to see a more colorful side of Amiga technology.

Psygnosis Does It Again!

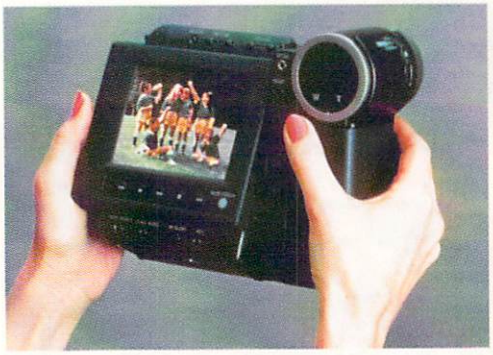
Psygnosis, who rose to fame with their addictive, award-winning *Lemmings*, announced a variety of new games and even newer platforms. **Bill's Tomato Game** (Diversions, p. 81), is a bright new problem-solving game. While the scenario, art, and style are different in this game, it is easy to see that Bill's will generate the same wide appeal to audiences as Lemmings did.

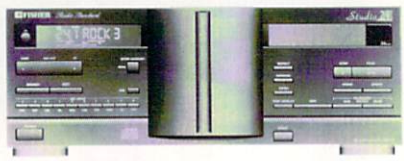
Psygnosis also announced the release of **Lemmings II.** Lemmings II is the sequel to Lemmings and brings the same intellectually challenging, fast-paced play. Having survived the perils of Lemmings and *Oh No! More Lemmings*, the Lemmings have populated every corner of Lemmingland and evolved into 12 distinct tribes. In addition to their basic skills, each Lemming tribe has developed unique behaviors which are specifically suited to mastering the dangers found in their corner of Lemmingland. But, you'll have to save them again, tribe by tribe, bringing them all together for a final exodus. Lemmings II offers technical improvements like four-way scrolling; rich, sampled sound effects and music; and an innovative modular design that will allow extensive customization of future enhancements in sound and video support. Lemmings II is due for release at the end of February and will list for $59.99.

Creepers is another problem-solving game from Psygnosis. You must save the caterpillars from Boiling Oil or Hungry Blackbirds facing the machines, the tools, the fans,



Psygnosis intends to keep its entertainment edge with CD-ROM games, *Dracula* and *Microcosm*, and the introduction of *Lemmings II*.







CES is not just computers!
Whether it's Sharp's LCD display video camera (above), Fisher's new Studio 24 CD player (above right), or Tyco Industries' Garfield talking phone (right), CES always demonstrates the latest in innovation.

the squishers, and the bombs. Creepers features over 70 levels, 16 soundtracks, animated sequences every 10 levels, multiple difficulty grading, and multiscreen viewing with a $49.99 list price.

Walker is a fast-paced shooting adventure to save a post-apocalyptic world. Walker excels in detailed artwork and smooth animation, evident in the way the Walker "head" tracks the crosshairs of the firing control. Gun temperature, shield strength, and more are a major consideration in game play. The hard-disk installable game will be available in March for $49.95.

Hired Guns is a four-player role-playing game in the first person. The five-disk game will also be available in AGA for the new Amiga 4000 and the Amiga 1200. The game is hard-disk installable, contains 30 pieces of outstanding music, and will be available in March for around $59.

Microcosm is a journey within a human body in a life-and-death fight to save the life of a VIP. As pilot, your mission is to remove the terrorist's Grey-M device with a variety of submersibles and a range of weaponry by negotiating your way through the complexes of blood vessels and capillaries in route to the brain. The proposed launch date of Microcosm on CD-ROM for various formats is the Spring of 1993.

Encapsulating the finest elements of the new Francis Ford Coppola blockbuster, **Dracula**, you become the vampire-obsessed Harker determined to defeat Dracula in his various guises. You will cross lands of varied terrain and meet hundreds of vicious creatures in your mission. With over 15 minutes of original and fully-interactive movie footage, Dracula, the game, on CD-ROM for assorted formats has a Spring '93 proposed launch date.

Domark

AV-8B Harrier Assault flight simulator is a multi-role strategic, tactical, and operational scenario with "Gung Ho" dogfighting. Domark's AV-8B provides full flight modeling including Vertical Short Take Off/Landing (VSTOL) and Vectoring In Forward Flight (VIFF). As Commander of the Rapid Response Force charged with the mission to reinstate the local government and regain human rights for its citizens, you set troop objectives, fly support on attack and reconnaissance missions, and more. Using artifical intelligence, the enemy reacts to each situation in a realistic and strategic manner. The scenarios are limitless, for real-time reponses to your actions influence the eventual outcome of the war. Harrier Assult was designed by Simis Software and will be available for Amiga by February, 1993 at $59.95.

Domark's **Virtual Reality Studio 2.0** for North America is scheduled to ship by February, 1993. VRS 2.0 now provides high-end functionality allowing users to more easily design, create and distirbute custom 3-D worlds. Users will be able to create worlds by using objects provided in **Clip Art Library**. To make object selection easier, Domark provides a **Clip Art Catalog** with the program. VRS 2.0 also allows for simple point-and-click creation of **spheres** making VRS 2.0 the only complete 3-D design tool available in an end-user price range. Other features new to VRS 2.0 are Flexicubes, Fading and Transparent Objects, VCR-Style Playback Function and Double the Number of Control Commands. Virtual Reality Studio is available for Amiga at a suggested retail price of $99.95.

Ocean of America

In **Cool World**, players take on the role of cartoonist Jack Deebs, creator of Cool World, in the cartoon-land home of the lovely Holli Would and other characters called Doodles. Deebs' entry to Cool World leaves the door open for the Doodles to escape to the real world. Now they are running around Las Vegas and it's up to the gamer to get them back to Cool World. But first the gamer must battle through Cool World, which turns out to be full of dangers itself. Priced at $49.95.

Playing Cornelius, **Elf** gamers travel through enchanted woods, mines, forest thickets, mountain peaks, and jungle swamps in search of Princess Elisa, captive of the evil Necrilous. More than 60 locations with eight multi-level quests, additional pursuits and hundreds of mini-challenges. SRP—$39.95.

In **Epic**, the mission is no less than the salvation of all the races of the Federation. Convoy an entire civilization of people to new worlds. Gamers control the head of the convoy, in the cockpit of one of three, advanced Epical starfighters of awesome power and destructive capabilities. SRP-$49.95

Espana: The Games '92 allows you to experience track and field, swimming and diving, and tough one-on-one competition sports like boxing and fencing. There are more than 30 events and eight teams. Gamers play in any of four languages, and may choose a team's country to represent. SRP-$39.95

With **Hook**, Neverland is more dangerous than ever as gamers, playing Peter Pan, seek his kidnapped children and their captor, Captain Hook. Vertical scrolling, with 3-D and 2-D views, add new dimensions to the gameplay. SRP-$49.95

Lethal Weapon is based on the adventures of Los Angeles cops Roger Murtaugh and Martin Riggs. Gamers are faced with a veritable crime wave, in which they must duck and dodge impending doom in the subway, a shopping mall, office buildings, and the waterfront—where one wrong move will set them face-to-face with ravenous sharks. SRP-$49.95

Using a variety of dominoes, each with a different movement, makes **Push-Over** a serious challenge for any gamer. As the spunky ant moves through this labyrinth, his strategy must accommodate special dominoes with erratic movements. SRP-$49.95

In **The Addams Family**, the conniving Abigail Craven is after the Addams' hidden fortune. She first recruits Uncle Fester, then using him, along with her minions, captures other members of the Addams Family. It's up to Gomez to search for Pugsley, Wednesday, Moriticia, and Grannny and restore Uncle Fester's memory. After dodging sinister creatures and outwitting devious traps, Gomez winds up in the underground vaults of the mansion, ready for a confrontation with the evil judge. SRP-$49.95

Wizkid's light-hearted storyline is as wacky as its graphics: Wizball, Wizard and Nifta The Cat, the game's three heroes, must track down their long-time nemesis, Zark, in The Land of Wiz. Gamers can choose to be any one of the three heroes—each of whom possesses unique characteristics—as they set out to collect as many kittens as they can, while bopping Zark's nasty minions with bricks. SRP-$39.95

More Games!

ReadySoft's **Dragon's Lair III: The Curse of Mordread** brings Dirk back. In revenge for her brother's destruction, the evil witch Mordread has captured Dirk's beloved family. Dirk is on a frantic quest through time to save Daphne and the children before they are trapped forever by Mordread. SRP-$59.95

Ready Soft also announced **Combat Classics**, a combination package of *F15 Strike Eagle II*, *688 Attack Sub*, and *Team Yankee*, at a SRP of $49.95. **King's Ransom**, **Pacific Islands II**, and **CyberSpace** are all new releases for April.

A-Train is the latest Software Toy™ from Maxis. A-Train challenges you to build the metropolis of your dreams, with a railroad as the transportation hub, and develop a city around a clean and efficient public transit system. SRP-$69.95

Roctec, Sharp, Panasonic, and More!

Roctec Electronics Inc., makers of Amiga Roctec drives and more, announced the **P.I.P. VIEW**. P.I.P stands for picture-in-picture and Roctec is the first company to offer this feature in a remote control, 181-station, cable-ready box that can be attached to any existing television. Because the P.I.P. can switch from four separate input sources, P.I.P. could be an AV switcher capable of augmenting a Video Toaster workstation and more. Available in both PAL and NTSC, the P.I.P. has a suggested retail price of $149.95.

One *neat* product shown at CES was the **Cord Control Kits** from Get Organized. The small, colorful Superflex™ slit plastic tubing is large enough to hold all your troublesome wiring, yet small enough to fit neatly behind your computer, video, or stereo equipment. The slit in the side of the tube allows you to place new wires in the tube or bring existing wires out. The end result is one sleek tube holding the mass of wires that normally clutter the rear of electronic devices.

Praise goes to Sharp Electronics Corporation for their unique redesign of the traditional camcorder. Sharp's new Hi-8mm **VL-HL100U ViewCam** is the first camcorder with a full-color, four-inch LCD screen as a view finder. The four-inch anti-glare LCD is perfect for people who wear glasses or who just want to see what they are shooting. The LCD view finder pivots a full 180 degrees to be also used as a monitor when filming yourself.

The 7.8" x 3.0" x 5.8"-camcorder is slightly larger than a regular 35mm camera and weighs only 1.9 pounds without battery and tape. Other features include a "Digital Still Snapshot" to capture a five-second still "snapshot" on tape of an image with audio. There is also a strobe function, a digital electronic image stabilizer to take the "jitters" out of your videos, an 8x power zoom, infrared remote control, Hi-Fi stereo recording, digital auto white balance, full-range auto focus, flying eraser head, high-speed electronic shutter and more. The LCD's ability to pivot makes it possible to record scenes you cannot see directly such as shooting over the heads of people in a crowd. With prerecorded tapes and extra batteries, this unit also becomes a great VCR for travel. At $2,199, the price seems high, but this feature-packed video camera will find its place in many Amiga video studios.

Panasonic's **CPA Check Printing Accountant** can automatically track two checking accounts, link with another CPA to share data, track credit-card purchases and expenditures, perform simple calculations, remember up to 50 phone numbers, and print checks, all from a device about the size of a checkbook. The CPA can remember up to 25 payee names for printing or allow you to enter the information directly. The bi-directional printer prints the check from its storage of as many as 25 checks. The CPA is a budget bender at $349.95, but for some households, the savings on bounced checks, service charges, etc. could help.

Tyco Industries' **Garfield Talking Telephone** speaks for itself. Garfield comically calls to you after each ring with one of 11 phrases from "Hello" to "It's the Govenor." Garfield could be on your desk for approximately $40.

Fisher's **Studio 24** holds 24 CDs upright in an internal dust-inhibiting system carousel that rotates the requested disks to the internal player. Fisher calls the Studio 24 a CD Management System because selections can be categorized in a choice of 7 preprogrammed categories, or user programmed to an additional 31 phrases or groups. Studio 24 is designed to fit in your current system by size (16.2 x 16.5 x 7.2 inches) and by price (SRP-$499.95).

Virtual Reality has come a step further with the introduction of Virtual Vision's **Virtual Vision Sport**™. The system (less than $900 and based on the military heads-up-display) looks like a pair of sunglasses, yet you see the real world and a video image. The glasses project an image in the lower outside edge of either the right or left eye from its belt holstered TV tuner. The one-inch image has a virtual image of 60 inches. The glasses could be useful with camcorders, game machines, and computers. While, current resolution is limited to 1,000 pixels, it could become an interface for the Amiga or CDTV.

CES CD-ROM Expansion

3DO, Pioneer, and TMC Announce CD-ROM Multimedia Hardware

3DO? According to various sources, 3DO (of San Mateo, CA) stands for 3-D Operating System. 3DO executives explained it as the next "o" format, such as video, audio, stereo, etc. Everyone agrees that 3DO is the birthchild of Electronic Arts founder Trip Hawkins. Mr. Hawkins was excited about the possibility of interactive multimedia and CD-ROM capacity, yet frustrated with the varied platforms vying for market position. Mr. Hawkins then gained the support of such diverse companies as Matsushita, owner of Panasonic and Technics; AT&T; Time Warner; and MCA (Universal Studios).



Trip Hawkins (above), R. J. Michal, and David Needle (left-top to bottom) are founding members of 3DO



Photos courtesy of 3DO

3DO's creative team is straight from Amiga legend. R. J. Mical and David Needle were both on the original Amiga team and they are the designers of the 3DO platform. Both men were also responsible for the design of the Atari Lynx. Mical handles software and Needle designs hardware in a unique co-design symbiotic environment where each generate and support the other.

3DO Developers are offered vast resources in materials (60 hours of music, 20,000 still photographs, hours of film footage, 350MB of clip art, and 1,600 texture effects) from a Content Library of 170 CD-ROMs offered free of charge and without licensing fees. 3DO promises graphics animation at 50 times present computer systems; a double speed CD-ROM player; a 32-bit RISC CPU; full-screen, full-color video at 30 fps, multitasking and more all made possible by a pair of animation engines that display or move up to 64 million pixels per second by organizing graphics into "animation cells." Software development (currently requiring a Mac IIci or better) uses tools such as Warping to bend, twist, skew, etc. images; Transparency to simulate rippling water, smoke and more; Lighting Effects to design a light source on or off the screen without redrawing the image; texture mapping; and more.

3DO is not a single device, but a standard. Panasonic was demonstrating a 3DO device (yet unannounced) at CES. AT&T also announced they would create a 3DO product. With emphasis on video, sound, graphics, etc., 3DO appears to be designed as a panacea for the 90s.

Pioneer Works With Many

Instead of supporting a single standard, Pioneer introduced **LaserActive** which encompases several standards. LaserActive will play 8- and 12-inch Video Laser Disk in CAV and CLV formats, Audio CDs in both 5- and 3-inch. While CD-I and CD-ROM store 540MB of digital information (audio or video), LaserActive will store the same 540MB plus 60 minutes of FM audio. Pioneer also claims CD-I can store 7,000 natural still pictures without sound while LaserActive will store 108,000 of the same pictures plus 60 minutes of FM audio.

With the optional control packs and software, Laseractive becomes a MEGA-LD, an LD-ROM, or a Karaoke machine. A MEGA-LD pack reads 8- and 12-inch Mega-LD discs, SEGA-CD discs, GENESIS ROM cartridges, and standard CD-G discs. An LD-ROM pack reads 8- and 12-inch LD-ROM discs, TURBO GRAPHICS, CD-ROM discs, ROM cards, and standard CD-G discs. The Karoke option uses Karaoke LaserDisc.

TMC

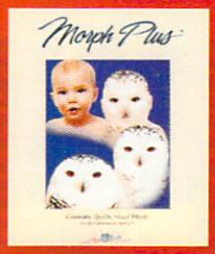
TMC International Corp. Ltd. (Buckinghamshire, England) quietly distributed a brochure from a small booth in the CES games area which discussed a high-performance, 16-bit databus, 32-bit technology, CD-ROM-based game machine. While the handout lacked more information, a company executive suggested the product could be ready as early as Fall '93. TMC came to CES to secure software developers.

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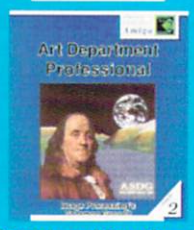
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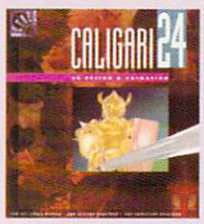


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Feedback

Letters to the Editor

edited by Paul L. Larrivée

Monitor ELF from All Directions

Your article on monitor radiation levels ("Radioactive Monitors", *AC*, V7.12, p. 32) was interesting and informative. Yet, when I looked at the data presented, I found it curious that the *rates* of reduction with increasing distance were not constant. For example, at four inches this rate changed from 69% in front to 86% from the left side.

I don't remember much from high-school physics or about the inverse square law and such, but I find this discrepancy surprisingly large. Could it be that your measuring instrument is giving only a crude indicator of radiation? In any event, it is probably sufficient to identify potential problem areas for ELF fields.

Also, given the location of human reproductive organs in relationship to how one sits at the computer and the considerable variance in radiation from different locations, it's too bad you could not get an ELF measure from the bottom.

Thanks for the information!

Barry Soper
Ruston, LA 71271

*An important point, Barry. As the author of the article explains, "I could not check the ELF radiating from the bottom of the monitor because of the way it is situated in my work space." Perhaps there is a reader who might want to do a measurement from below the monitor and report to us.—**PLL***

Thank *GUIDE!*

This is to congratulate you for your commitment to this wonderful machine that is the Amiga. I am a subscriber of all three magazines (*AC*, *AC's GUIDE*, and *AC's TECH for the Commodore Amiga*) that P.i.M. publishes. And you can be sure that I will renew my subscriptions.

I have found the *GUIDE* to be invaluable. For example, I recently received a copy of *Guru's Guide to the Commodore Amiga*. The information on where to order this book was available only in your *GUIDE* edition. Thanks for publishing this information!

Hernán Rodrigo Eguiluz
Buenos Aires, Argentina

We keep emphasizing that the GUIDE *is the best source available anywhere for Amiga products and services.—**PLL***

Something Fishy

For years now, I have read your magazine, enjoying especially your coverage of the Fred Fish Collection. Your magazine most inspired me in writing software because, however small the print, the idea of seeing my name in the back pages of *Amazing* is like winning a World Series ring or an Olympic gold medal.

I sent a disk to Fred Fish during the early months of 1992. He included it in the library on disk 651. The July issue of *Amazing Computing* covered the Fish collection up to disk 650. Imagine my dissapointment on finding the August issue covering disks 660 onward. For some reason, ten disks had been skipped.

Errors happen. Undaunted, I sent an upgrade to Fred Fish in late August. He included my upgrade in his collection on disk 728.

Your November issue covered the collection up to and including disk 720 and your December issues reviews disks 730 upwards. Once again ten disks have been skipped, including the disk on which appeared my program 501 v1.15.

The program is in circulation on BBSs all over the world, and yet the place I had most counted on seeing it mentioned consistently omits it.

Hoping to hear from you shortly regarding this problem, I remain a faithful reader.

Gilles Lepage
Montreal, Quebec

You're right: those did get away. While we always attempt to maintain a complete list of contents for the newest Fred Fish disks, we did miss these. Mr. Fish has been doing an extraordinary job in providing new disks more frequently than ever so that it's no small task to note the latest additions. Check page 92 in this issue for the missed listings. For a complete list of current Fred Fish disks, catalogued by program and indexed, refer to AC's GUIDE to the Commodore Amiga. *Between* AC *and the* GUIDE, *we will keep you informed of the newest freely redistributable software available.—**Ed.***

•AC•

AMAZING COMPUTING

❦ Vol. 7, No. 1 January, 1992
Highlights Include:
"Memories," A500 memory expansion, by Sam Ammons
"Help for the Help Key," by Rick Manasa
"Getting the most from your RAMdisk," by Keith Cameron
"Installing and Using an IBM mouse with Your Amiga," by Phillip R. Combs
"DePuzzle," a puzzle-solving program for brain teasers, by Scott Palmateer
"ZipTerm," learn how to use Console.device and Serial.device while creating a telecommunications program, by Doug Thain
ALSO: Coverage of Germany's Amiga '91 and London's World of Commodore shows.

❦ Vol. 7, No. 2 February, 1992
Highlights Include:
"Deduct That Interest with FC CALC," by Rick Manasa
"Finding the Right Multimedia Fit," by Dave Spitler
"Images in Dentistry," by Ken Larson
"Signmaking on the Amiga, " by Karen Pringle
"Perfect Pages," how to produce PostScript-quality pages without buying a PostScript laser printer.
ALSO: Coverage of Toronto's World of Commodore Show

❦ Vol. 7, No. 3 March, 1992
Highlights Include:
"The Miracle Piano Teaching System," by Christopher Piper
"DeluxePaint IV," by R. Shamms Mortier
"Semi-Automatic Painting and Animation," by Kevin Lude
"Screen Photography," taking pictures of your Amiga screen, by Pat Murphy
Also, a special section on Amiga Graphic Design and a look at some special Amiga Artists.

❦ Vol.7 No. 4 April, 1992
Highlight include:
"Foundation", a review by Dave Spitler
"AdPro 2.0", review by Merrill Callaway
"ATonce Plus", review by Rich Mataka
Also, construct a database using your favorite authoring system, customize your start-up sequence, and create and produce your own video!

❦ Vol. 7 No.5 May, 1992
Highlights Include:
"Pelican Press", a review of this entry-level DTP package by Jeff James
"AdIDE/40 Amiga 500 Hard Drive Kit", review by Merrill Callaway
"Building an Amiga MIDI Interface", super project by John Iovine
Also: AC's annual Desktop Publishing Overview! This issue includes a look at the top DTP packages as well as a study of printers, fonts, and clip art available for the Amiga.

❦ Vol.7 No.6 June 1992
Highlights Include:
"Freeze Frame Video Recorder", review by Merrill Callaway
"HP DeskJet Color 500C", review by Richard Mataka
"MREAD", a programming project by Chuck Wardin
Plus: Don't miss an exciting edition of our ARexx feature by Merrill Callaway or 3-D animation with DPaint IV in "The Video Slot", by Frank McMahon.

❦ Vol.7 No.7 July 1992
Highlights Include:
"Modem Rundown", A comprehensive look at modems for the Amiga
"G-Force 040", a review of GVP's 040 accelerator, by Rich Mataka
"SuperJam," a review of this superb music maker from The Blue Ribbon Soundworks, by John Steiner
"FounDex," a tutorial using Foundation's stacks and scripts, by Dave Spitler
Plus, a look at telecommunications and the Amiga including hardware, software, and services.

❦ Vol. 7 No. 8 August, 1992
Highlights Include:
"Digi-View 4.0", by Matt Drabick
"GVP's Digital Sound Studio", review by Matt Drabick
"3D Effects from 2D Amiga Art", tutorial by Shamms Mortier
Plus:
Super ARexx Column for July!
Video Toaster UpDate featured in The Video Slot!
And Much More!

❦ Vol.7, No.9, September, 1992
Highlights include:
"Professional Calc," review of Gold Disk's premier accounting software by Bill Frazier.
"True Basic 2.0" A review of the latest release of the True BASIC language by Paul Castonguay.
"Developing Desktop Savvy," a special project for your favorite DTP software. Using specialty papers to create brochures and pamphlets, by Pat Kaszychi.
"The Video Slot" This month, learn about the new features of Imagemaster, by Frank McMahon.
Don't miss AC's super game coverage in *Diversions*.

❦ Vol.7, No.10, October 1992
Highlights Include:
"Amiga Warrior," Commodore's newest Amiga is a fighter capable of bringing the best of the Amiga to the American consumer.
"MegagageM's CellPro," a review by Merrill Callaway.
"Multi-colored Text in DPaint III," A tutorial to produce dazzling effects with your text, by George Haasjes.
"Game Creation with AMOS," create your own Amiga game, by Jack Nowicki.

❦ Vol.7, No.11, November 1992
Highlights include:
"Amiga 4000," Commodore creates a bold new direction in Amiga computing with expanded graphic resolutions, modular CPU, and more.
"Progressive 040/2000," a review by Rick Mataka.
"Remap Magic," Learn why this tool is your best bet for making use of your palette.
"Beginning C," Chue Xiong covers some of the basics of the C language.

❦ Vol.7, No.12, December 1992
Highlights Include:
"Polishing Basic Programs," Marianne Gillis shares the secrets of BASIC programming experts.
"Banners," A tutorial on creating banner-length printouts, by Pat Kaszycki.
"Structured Drawing & TueBASIC," paul Castonguay shows how TrueBASIC fully supports any level of hierarchical structure.
Also, complete reviews of Voyager 1.1, PIXOUND, VistaPro 2.0, and OpalVision.

❦ Vol.8, No.1, January1992
Highlights Include:
"Creating a Storyboard in Final Copy," see how to layout your animation storyboard in Final Copy. by R Shamms Mortier.
" A Look at 24-bit Libraries," Shamms Mortier looks at 24-bit libraries.
"Using Laser Disk Players with the Amiga," Rom Battle examines the benefits of laser disks as a source of video images. He also shows an easy way to set them up.
Plus: A complete review of the new A1200 & coverage of Comdex Fall 92 & the FES-London.

❦ Vol.8, No.2, February 1992
Highlights Include:
" Extending the AMOS Sort," Dave Senger looks at the AMOS sort function.
" Business Cards," Soft-Logik's Dan Weiss gives an in-depth tutorial on how to create your own business cards.
"AD1012," a review by Rick Manasa.
AND! A special sneak preview of the One-Stop Music Shop from Blue Ribbon & complete coverage of the WOCA Toronto!

AC's TECH

❦ AC's TECH, Vol. 1, No. 4
Highlights Include:
"GPIO—LOw-Cost Sequence Control" by Ken Hall
"Programming with the ARexxDB Records Manager" by Benton Jackson
"The Development of a Ray Tracer—Part I" by Bruno Costa
"The Varafire Solution—Build Your Own Variable Rapid-Fire Joystick" by Lee Brewer
"Using Interrupts for Animating Pointers" by Jeff Lavin
—and more!

❦ AC's TECH, Vol. 2, No. 1
Highlights Include:
"Build Your Own SCSI Interface" by Paul Harker
"CAD Application Design—Part III" by Forest Arnold
"Implementing an ARexx Interface in Your C Program" by David Blackwell
"The Amiga and the MIDI Hardware Specification" by James Cook
—and more!

❦ AC's TECH, Vol. 2, No. 2
Highlights Include:
"Programming the Amiga in Assembly Language Part 2", by Forest Arnold
"Implementing an ARexx Interface in Your C Program, Prt 2", by David Blackwell
"Iterated functions Systems for Amiga Computer Graphics", by Laura Morrisson
"MenuScript", creating professional looking menus easily and quickly, by David Ossorio
And Much More!

❦ AC's TECH, Vol. 2, No. 3
Highlights Include:
"HighSpeed Pascal," by Dabid Czaya.
"PCX Graphics," by Gary L. Fait.
"Programming the Amiga's GUI in C—Part 5," by Paul Castonguay,
"CAD Application Design Part 4," by Forest W. Arnold.
And Much More!

❦ AC's TECH, Vol. 2, No. 4
Highlights Include:
"In Search of the Lost Windows," by Phil Burke
"No Mousing Around," hide that annoying mouse pointer with this great program, by Jeff Dickson.
"The Joy of Sets," by Jim Olinger
"Quarterback5.0," a review by Merrill Callaway.

❦ AC's TECH, Vol. 3, No. 1
Highlights Include:
"Comeau Computing's C++," A review of this great new C compiler by Forest Arnold.
"Programming the Amiga in Assembly Language Part 5," by William Nee
"Make Your Own 3D Vegetation," Laura Morrison shows how to use iterated functions to create 3D trees and plants.
PLUS! The HotLinks Developer's Toolkit ON-DISK!

Back Issue Index

What have you been missing? Have you missed information on how to add ports to your Amiga for under $70, how to work around *DeluxePaint*'s lack of HAM support, how to deal with service bureaus, or how to put your Super 8 films on video tape, along with Amiga graphics? Do you know the differences among the big three DTP programs for the Amiga? Does the ARexx interface still puzzle you? Do you know when it's better to you use the CLI? Would you like to know how to go about publishing a newsletter? Do you take full advantage of your RAMdisk? Have you yet to install an IBM mouse to work with your bridgeboard? Do you know there's an alternative to high-cost word processors? Do you still struggle through your directories?

Or if you're a programmer or technical type, do you understand how to add 512K RAM to your 1MB A500 for a cost of only $30? Or how to program the Amiga's GUI in C? Would you like the instructions for building your own variable rapid-fire joystick or a 246-grayscale SCSI interface for your Amiga? Do you use easy routines for performing floppy access without the aid of the operating system? How much do you really understand about ray tracing? **The answers to these questions and others can be found in *AMAZING COMPUTING* and *AC's TECH*.**

For more information call
1-800-345-3360

The Fred Fish Collection

Below is a listing of the latest additions to the Fred Fish Collection. This expanding library of freely redistributable software is the work of Amiga pioneer and award winning software anthologist, Fred Fish. For a complete list of all AC, AMICUS, and Fred Fish Disks, cataloged and cross-referenced for your convenience, please consult the current ***AC's Guide To The Commodore Amiga*** available at your local Amazing Dealer.

Fred Fish Disk 771

AutoSave A small program which calls an ARexx script at regular inter- vals, controlled through a Workbench window. Although intended to provide an "AutoSave" function for applications, the script can do anything. Includes C source, which demonstrates simple use of GadTools and the timer device. Requires Kickstart 2.0 or later. Author: Michael Warner

BBBBS Baud Bandit Bulletin Board System. Written entirely in ARexx using the commercial terminal program "BaudBandit". Features include up to 99 file libraries with extended filenotes, up to 99 fully threaded message conferences, number of users, files, messages, etc. are only limited by storage space, controlled file library and message conference access for users and sys- ops, interface to extra devices like CD-ROM and others, all treated as read only, complete Email with binary mail and multiple forwarding, user statistics including messages writ- ten, files uploaded or downloaded, time, etc, plus much more. Works under Amiga OS 1.3 and greater, tested through 3.0. This is version 5.7, an update to version 5.5 on disk 729. Includes complete ARexx source. Author: Richard Lee Stockton

PubChange A commodity for AmigaDos 2.04. It isn't a public screen man- ager, but it is useful when used in conjunction with one. It is designed to make public screens easier to use. Whenever a new screen is brought to the front, this screen is examined. If it is a public screen, it is made into the default automat- ically without having to explicitly do it from within a public screen manager. Thus, the current default public screen is always the one which you have most recently brought to the front, and applications which use the default public screen will appear there. Version 1.0, binary only. Author: Steve Koren

PKludge A mode promotion commodity for AmigaDos 3.0. It allows any mode to be promoted to any other mode. Mode promotion keyed from the screen name or title, and resizing and moving screens during mode promotion. It is useful to 1) promote all screens to a single scan rate to avoid re-syncing on multisync moni- tors during screen flipping, 2) use 800x600 or higher resolu- tions with some applications which don't know how to open those screens but can otherwise handle bigger screen sizes, 3) use PAL:Productivity 640x400 mode instead of DblNTSC:High Res Lace mode, since the productivity mode tends to be more visible on some Amiga 4000's. Version 1.0, binary only. Author: Steve Koren

NiceMove Some different examples in C of MOUSEMOVE event handling during high CPU or DMA usage. Version 1.00, first release. Includes source and a sample program. Author: Thies Wellpott

Sing Sing will read a text file (actually ANY file) and try to "sing" the characters in it using internal simple waveforms in 4 voices. Binary only. Author: Richard Lee Stockton

Sound Sound sample player. Will play ANY file as sound. Understands IFF, stereo, and fibronicci compression. Can play direct from disk. Uses only 4k of chip ram. Effects include fade and grow. Works from CLI or WorkBench, all OS thru 3.0. Includes complete C source. Author: Richard Lee Stockton

SourcOpt A little assembly language source optimizer. While most assem- blers have optimization, they optimize the compiled code. One disadvantage of this however, is when debugging code thru a disassembler or monitor, the code you see differs from that you have written because of the optimization. By optimizing the source first, you can eliminate some of these differences. Version 1.0, binary only, CLI usage only. Author: Alexander Fritsch

Fred Fish Disk 772

VMB Demo version of VIDEO MUSIC BOX, a program designed to provide an easy to learn and use facility that non-musicians or begin- ning musicians can use to compose original background music for their Amiga multimedia productions. No prior music com- positional knowledge is required to generate basic musical styles from pre-arranged music pattern templates and chord progressions. Individuals having increased musical backgrounds can use the many included editors to define new chord-types, "revoice" chords, create new chord progressions, perform basic sequence editing, and create additional pattern templates. Supports both MIDI Format 0 and IFF SMUS music file formats for compatibility with all multimedia authoring programs. Version 1.6, second major upgrade to version 1.0 on disk number 660. This new version is AmigaDOS 2 compatible, allows un- limited pattern generation in a single sequence, has improved musical dynamics, and expanded MIDI. Requires 1 Meg. Author: D.T. Strohbeen

Fred Fish Disk 773

Detache A very small and simple utility that will detache a file from the file system. Note that this is completely different than deleting a file. In particular, Detache works even if the file system did not restart properly because of a failed validation. This happens rather frequently if the Amiga crashes during a write on a hard disk partition: you get the dreaded "checksum error on block xxx" requester, and no writes are allowed to the partition. If you know the name of the guilty file (the file the faulty block belongs to) you can simply detache it, and the file system will be happy to restart. Requires OS2.04, binary only. Author: Sebastiano Vigna

Enforcer A tool to monitor illegal memory access for 68020/68851, 68030, and 68040 CPUs. This is a completely new Enforcer from the original idea by Bryce Nesbitt. It contains many new and wonderful features and options and no longer contains any exceptions for specific software. Enforcer can now also be used with CPU or SetCPU FASTROM or most any other MMU-Kick- start-Mapping tool. Major new output options such as local output, stdout, and parallel port. Highly optimized to be as fast as possible. This is version 37.26, containing a bug fix to version 37.25 on disk number 754. Requires V37 of the OS or better and an MMU. Author: Michael Sinz

Ls An update based wholly but loosely to the version 3.1 of Ls on disk number 236 by Justin McCormick. Includes many enhance- ments and bug fixes. Ls is a popular, UNIX style directory lister. This version features intelligent columnar listing, versatile sort options, UNIX-style pattern matching, recursive subdirectory listing, customized output formatting and much more! Version 4.7ljr, requires at least OS 2.04, includes source. Author: Loren J. Rittle.

NewPop An upgrade to the original "POPCLI" by John Toebes. Features include a hotkey CLI (of course!), instant or timed screen blanking, a discreet informative backdrop window in the title- bar region of the WorkBench screen that gives the date, a rough indication of CPU usage and SCSI disk I/O and available memory. Also includes a runtime configuration file. Version 4.0, includes source. Author: Loren J. Rittle

Quest General purpose interactive AREXX question/ answer routine that includes a very funny script ("HackerTest") to rate your "computerese" and hacker ability. Quest can be used for any similiar type question-answer script. The original hackertest was created by Felix Lee, John Hayes and Angela Thomas in Sep- tember 1989. Author: Erik Lundevall

REXXProgs Some good, well-commented, examples of REXX programming. Includes Palette.rexx, an ARexx tutorial on using the rexx- arplib.library to open a window (in this case a color palette) on any public screen and send messages to another ARexx pro- cess. ShoList.rexx, displays system lists (libraries, ports, tasks, etc.) and Sz.rexx, Displays alphabetically sorted directory with filesizes. CLI only. Author: Richard Lee Stockton

Wangle Very addictive "sliding-block" single player strategy game. The object is to group four smaller squares of the same color together in such a way as to form a larger square. Once started in a direction, blocks slide until they hit another block, a wall, or in some cases, fall through the floor! Includes 50 levels and a level editor. Binary only. Author: Peter Händel

Fred Fish Disk 774

ExtraCmds A small set of AmigaDOS commands, chiefly inspired by UNIX, written to augment the collection distributed as part of the System Software Release 2.04 (V37) and will not run under older releases. This is the first public release consisting of the commands Common, Concat, Count, DirTree, Head, Lower, Split, Tee, TimeCom, and Unique. Source code and manual pages in both Danish and English are included. Author: Torsten Poulin

HuntWindows Starting with 2.0 you can make screens bigger than the visual size of your monitor. On a double-size workbench, catching windows like requesters etc. can be quite annoying at times. This little utility hangs itself on the Vertical Blank inter- rupt to find out which window is being activated and moves the screen to show the window in full view. Version 1.4, includes source in assembler. Author: Jörg Bublath

ISpell An "Amigatized" port of a Unix version of a freely distribu- table interactive spelling checker. Two major modes of oper- ation: Original Interactive Mode to allow a user spell check and correct a text document and ARexx Server Mode that allows the end user to hook ISpell up to text editors and other things that need a spell checking service. Regular expression lookup of word patterns is also possible in ARexx Server Mode. Includes Arexx macros for GUISpell (included), CygnusEd, Mg, TurboText, GNU emacs, VLT and WShell. Version 3.3LJR, an update to the version released on disk number 191. Requires AmigaOS 2.04 or later. Includes source. Author: Many! Current version by Loren J. Rittle

SetAslDim A very small and simple 2.04-only utility which lets you set the position and dimensions that the ASL file, font and screen mode requesters will assume as default. It obtains this result by SetFunction()ing the AllocAslRequest() call of the asl.lib- rary. Binary only, CLI usage only. Author: Sebastiano Vigna

SetSystem A very small and simple 2.04-only utility which forces the SYS_UserShell tag on each System() call. This means that every application will use your user shell (for instance, Bill Hawes's WShell) instead of the system shell. Binary only, CLI usage only. Author: Sebastiano Vigna

Fred Fish Disk 775

ICoons A spline based object modeller which can be used to generate objects in TTDDD format. TTDDD files can be converted to lots of different object formats by using the T3DLIB shareware package by Glenn Lewis. Line mode and Flat mode solid render- ing as well as Gouraud and Phong shading. Requires a machine with a floating-point co-processer. Version 1.0, includes source. Author: Helge E. Rasmussen

Fred Fish Disk 776

CopDis An oldie but goodie I found while poking around the net. CopDis is copper list disassembler that can be run from the CLI or linked with and run directly from an application program. Version 34.1, an update to FF261. The code has been cleaned up, some bugs fixed and the ECS instructions added. Includes source. Author: Karl Lehenbauer, enhanced by Sebastiano Vigna

JEdYet another programmer's editor. Lots of features, including: total customization, a powerful programming language, multi- file/multi-view editing, number of windows is only limited by memory, clipboard support (cut/paste on any unit), any window can have any (non-proportional) font, an Arexx interface, and more. Version 2.05, (apparently unrelated to the version of Jed on disk 297). Requires OS2.0 or later, includes source. Author: John Harper

XDME Version 1.54 of Matt's text editor. XDME is a "not-so-simple" WYSIWYG editor designed for programmers. It is not a WYSIWYG word processor in the traditional sense. Features include arbitrary key mapping, FAST scrolling, title-line statistics, multiple windows, and ability to iconify windows. This new version has some bug fixes, many new commands and several other new enhancements. Update to version 1.45 on disk number 530, includes source. Author: Matt Dillon, Enhanced by Aaron Digulla

WFile Small but useful tool to interchange ASCII files between different operating systems. Converts foreign symbols and adapts linefeed codes. Can also be used to expand tabs to multiple spaces or vice versa. It has builtin templates for interchange between Amiga, MS-DOS, OS/2 and UNIX systems. Profiles can be used for common adaptions. The new version contains new templates and the memory management system has been revised and optimized. Version 1.32, an update to version 1.11 on disk 536. Includes source in C. Author: Joerg Fenin

Fred Fish Disk 777

AGAtest Two little programs for the (lucky) owners of AGA machines that show all 2^24 colors on an AGA HAM8 screen without ever chang- ing the 64 base color registers. Includes source. Author: Loren J. Rittle

Chemesthetics Chemesthetics uses the calotte model to draw molecules. It has an Intuition user interface, can save pictures as IFF files and has many example files. The new version lets you raise the task priority for the painting process to get the results faster, shadow and reflection color can now be set to your desires, quicktrans.library is used for even faster painting. Versions for a math coprocessor and utilties to convert data files from Molec3D and to DKBTrace are included. This is ver- sion 2.14, an update to version 2.10 on disk number 574. Includes source in C. Author: Joerg Fenin

IncRev A small program for a makefile or an Imkfile to update a pro- gram's revision number after each successful compile process. This is version 1.10, an update to version 1.03 on disk number 536. Includes source in C. Author: Joerg Fenin

Sizer A small and pure shell utility that gives the size in bytes, blocks, and the total occupied by a directory, device or 'assign'. Accepts multiple arguments. Version 0.36, an update to version 0.20 on disk 741. Now handles control-C and gives more accurate results. French and English docs. Binary only. Author: Gérard Cornu.

Fred Fish Disk 778

DungeonMap A little tool that creates maps of dungeons and towns which can be used by a Dungeon Master (DM's) for use in a Dungeons & Dragons (D&D) game. These maps can be saved, edited, and printed. This is version 1.1, an update to version 1.0 on disk number 603, binary only. Author: Bill Elliot

EgoMouse A little hack that makes the mouse pointer turn towards the direction you move your mouse. A popular program on the Macintosh. Version 1.0, binary only. Author: B.J Lehahn, Pointer designed by F. Küster

Kurve Kurve is yet another function plotting tool which provides a very fast and easy way of plotting and analysing mathematical functions. The integrated function compiler makes this plotter to be the fastest one you've ever seen. Version 2.001, compatible with Kickstart 2.0 and 3.0beta. Includes source in C. Author: Henning Rink

MultiReq A FileRequester library, but it's not simply another file requester library, cause it's the first really multitasking file requester (as far as I know) and above this it also has a great number of other features, that make MultiReq superior to other file requesters. Written entirely in assembler to be small and fast. Version 1.20, binary only, shareware. Author: Andreas Krebs

OmtiFroh A very small "mini-hack" that allows Enforcer to be used with some specific SCSI controllers that don't bind an AutoConfig node into the ExpansionList. Enforcer registers the accesses to the hardware at 0xee0000 as 'hits'. This little gem will create the AutoConfig node for you. Includes source. Author: Henning Schmiedehausen

Fred Fish Disk 779

AAP_AAC Animation playback and convert programs. (AAP and AAC). AAP can show IFF ILBM pictures, show IFF ANIM_5 and IFF_ANIM_7 animations. It can show (long) sequences of animations and/or pictures using a script file and can operate from memory (preload) and/or disk. AAC converts between the supported anim filetypes and/or sequences of pictures. AAP version 1.2, AAC version 1.1. Includes source and a small sample sequence mix of pictures/animation from script file. Author: Wolfgang Hofer

Plasma A Plasma Cloud Generator for V39 AGA machines only. This pro- gram will generate Fractal Images called Plasma Clouds, using the AGA 256 color modes with full use of the 24 bit palette. Includes source. Author: Roger Uzun

RDBInfo Reads the RigidDiskBlock of the unit and device given as argu- ments, then displays the most interesting parts. Version 0.17, Binary only. Author: Gérard Cornu

SANA The official Commodore developer information package for the SANA-II Network Device Drivers. Includes the SANA-II spec, readme files, SANA-II drivers for Commodore's A2065 (Ethernet) and A2060 (ARCNET) boards, docs and includes, and some exam- ples. Release version 1.4, update to version on disk number 673. Author: Commodore-Amiga Networking Group

VPortPatch A very small 2.04-only utility that patches the graphics.lib- rary function MakeVPort() in such a way to avoid an annoying bug that keeps multipalette pictures from being

correctly scrolled (multipalette pictures contain the new PCHG chunk which specifies line-by-line palette changes; hundreds of colors can be displayed even in hi-res with multitasking and full system compatibility). Includes source. Author: Sebastiano Vigna

Fred Fish Disk 780

ABackup A powerful backup utility, that may be used both for hard disk backup and for file archiving. Has a full Intuition interface, a "batch" mode, can save/load file selection, handle HD floppies, etc... This is a *MAJOR* update, with support for XPK library, child task for disk write, error recovering when writing to a disk and more. Include both French and English versions. This is version 2.00, an update from version 1.60 on disk 759. Shareware, binary only. Author: Denis Gounelle.

MEM A little memory game where the object is to remember the face of a "thief" you are shown for a variable length of time depending on the level. You are then presented with a screen in which you have to "recreate" the face using various select- ions for eyes, eyebrows, nose and mouth. Version 1.0, binary only. Author: Jason Truong

NickPrefs An enhancement to IPrefs that manages three new preferences, WBPicture allows you to display any IFF picture in the main Workbench window, supplanting the original (and boring ;-)) WBPattern. BusyPointer lets you edit the clock pointer used by programs when they are busy. You may create an animated pointer. Floppy provides the ability to mess with the public fields of trackdisk, that is, the TDPF_NOCLICK flag, step delay and the like. Requires OS2.0, binary only. Author: Nicola Salmoria

RachelRaccoon A set of hand-drawn "Eric-Schwartz-animation-style" pictures of a new cartoon character. The pictures are overscanned hi- res-interlace (704x480) and are provided in 16-color, 8-color, and 4-color flavors so you can use them for Workbench backdrop pictures. The colors are arranged so that at least on Work- bench 2.x you will have standard looking titlebars. Author: Leslie Dietz

Fred Fish Disk 781

PowerSnap A utility that allows you to use the mouse to mark characters anywhere on the screen, and then paste them somewhere else, such as in another CLI or in a string gadget. Checks what font is used in the window you snap from and will look for the position of the characters automatically. Recognizes all non-proportional fonts of up to 24 pixels wide and of any height. Works with AmigaDOS 2.0 in both shell and WorkBench environments. This is version 2.1b, an update to version 2.0 on disk 726. Binary only. Author: Nico Francois

TKEd TKEd is a very comfortable Intuition-based ASCII editor with an english and german user-interface. It can read texts packed with PowerPacker, has user-definable menus, a comfortable AREXX interface with 109 commands, an interface to some errortools for programmers, macros, undo, wordwrap, supports foldings, has an online help mode, and many other features. TKEd is re- entrant and can be made resident. It's Kickstart 1.3/2.04 compatible, supports the new ECS-screenmodes, an application window and checks itself for linkviruses. Version 1.11, an update to version 1.05 on disk 689. Binary only. Author: Tom Kroener

TWA A commodity that remembers the last active window on any screen. If screens are shuffled, the window is automatically re-activated, when that screen is brought to front. Version 1.0, binary only. Author: Matthias Scheler

WBVerlauf Allows the owners of AGA machines to create a nice Copper background for a selectable color, using the whole 16 million color range of the AGA chips. By specifying the color of the first and the last line of the screen, WBVerlauf will make a smooth color change by setting a new color value on every scanline. Requires Kickstart 3.0. Version 1.4, binary only. Author: Christian A. Weber

Fred Fish Disk 782

DFA NOT just another address utility. DFA(ddress) features email support, dialing, different types of printing addresses, full commodity support, application icon, Arexx port, font sensitive windows and can be fully directed by the keyboard. This is version 1.1. Shareware, binary only. Author: Dirk Federlein

TwilightZone A modular screen blanker with a user-friendly control panel. Provides: Selection of blanker module from an expandable list of modules; A 'blank-now' feature by moving the mouse pointer into a corner of the screen; A 'blank-never' option by moving the mouse pointer into a corner of the screen; Adjustable timeout, and selectable wakeup events. Version 1.1/2.0, binary only. Author: Rainer Koppler

ValCon Converts a value from one number notation system to another. Currently the decimal, hexadecimal, binary and octal systems are supported. Version 1.10, freeware, binary only. Author: Chris Vandierendonck

Yak "Yet Another Kommodity". Features a sunmouse that only acti- vates when mouse stops, KeyActivate windows, Click windows to front or back, Cycle screens with mouse, Mouse and Screen blanking, Close/Zip/Shrink/Enlarge windows with programmable hotkeys, Activate Workbench by hotkey (to get at menus when WB obscured), Pop up a palette on front screen, Insert date (in various formats), KeyClick with adjustable volume, Pop- Command key for starting a command (like PopCLI), Gadtools interface. All settings accessible from Workbench tooltypes. Version 1.2, an update to version 1.0 on disk number 753, has some new features and several bug fixes. Includes source. Author: Martin W. Scott

Fred Fish Disk 783

APipe An 'Amiga pipe' device. If opened for read, it will run the file name as an Amiga CLI command, with the output going to the opening process. If opened for output, it will run the file name as an Amiga CLI command, with output to the opened file sent to the command as input. Version 37.4, an update to version 37.2 on disk number 601. Author: Per Bojsen

DiskInfo A program like the AmigaDOS 'Info' command, but it gives more extensive information on the disk (volume) and/or on the device requested. Version 1.00, freeware, binary only. Author: Chris Vandierendonck

Hackdisk A complete replacement for trackdisk.device minus support for 5.25 inch and 150RPM floppies. It offers a verify option and is faster than trackdisk 2.0. Hackdisk is supplied as a Rom- Tag module and may be RamKick'ed or placed directly in the Kickstart ROM. Free for non-commercial use, assembly source included. This is version 1.12, an update to version 1.10 on disk number 697. Author: Dan Babcock

KingFisher A specialized database tool providing maintenance and search capabilities for the descriptions of disks in the format used by this library. KingFisher's database can span multiple (floppy) disk volumes, can be edited by text editors that support long text lines, can add disks directly from unedited email or usenet announcements, can remove disks, rebuild a damaged index, find next or previous software versions, print or export (parts of) the database, and more. Includes a data- base of disks 1-770. This is version 1.11. Binary only. Author: Udo Schuermann

Fred Fish Disk 784

BindNames A solution to the problem of having to continually edit your startup-sequence to add assignments for logical variables when you add a new program. BindNames will read one or more files in a special directory and then create all the logical assignments at once and it can figure out dependencies, so it doesn't matter how you order the entries in the file(s). It will create directories that it can't find, such as RAM:Env and RAM:T and will generate warnings for assignments that it can't resolve. Version 1.0, includes source, public domain. Author: Dave Haynie

DirKing A very powerful replacement for the AmigaDOS 'List' and 'Dir' commands. It gives full control on the format of the directory listing and what information should be printed. The directory can be sorted on any field, or on several fields in the order you want. Supports many filters, such as name and date, and the filters can be made effective on files only, directories only or on both. You can also define a pattern for each level of the directory tree. Has an LFORMAT option which is useful for generating scripts. A unique feature is the ability to monitor the scanning process. English version supplied, German, French and Dutch versions available from the author. Version 2.10, shareware, binary only. Author: Chris Vandierendonck

Lyapunovia A mindboggingly colorful program that makes pictures from a simple mathematical formula. (And it's NOT Mandelbrot!) Lyapunovia pictures vary from colorful candy to mean metal (or something), offering you everything you ever wanted in visual representation of abstract nothings... This freely redistributable version of Lyapunovia has been thoroughly tested to work on all Amigas. Special registered versions with precision-extension, optimized for bigger CPUs, and support of WB 2.0/2.1 and WB 3.0 displaymodes (all 256 colors) are available. Version 1.0, binary only. Author: Jesper Juul

Fred Fish Disk 785

FileStorage Small demo of a file librarian, a database for files. The database exists as a number of index files and disks where FileStorage puts your collection of files. FileStorage 'remembers' how many free bytes each storage disk has and tries to fill the disks to the maximum. For each file you can add a 320 character long description and set 16 different (user definable) filetypes. Searching / adding / deleting / changing it's all there! Version 1.2, binary only. Author: Joep Grooten

RomCon Converts a decimal value into a value represented by roman numbers. You can convert from decimal to roman or from roman to decimal. E.g. '1992' equals 'MCMXCII'. Version 1.10, freeware, binary only. Author: Chris Vandierendonck

ScrnTst A program to reveal small irregularities in the beam sweep of computer monitors. Uses the MOIRE effect to render such defects more readily observable. A short program which should be compatible with OS 1.3 as well as releae 2.0. Version 2.0, binary only. Author: William Barish

SeePix Based on Olaf Barthel's 'LoadImage v1.11". SeePix is an IFF viewer/printer, featuring the ability to modify the colors of a pic for printing, allowing for truer colors in the printout (i.e. Blue prints Blue, not Purple), without modifying the pic itself. SeePix features an ARP interface, Iconization and the PathMaster File Selector. Manx AZTEC 'C' Source included. Author: Hank Schafer

Showgerb A Gerber display program. Gerber plotfiles are generated by several CAD packages. This program will display them on an Amiga using 1.3 and probably 2.xx and 3.xx. Source is not included but can be requested from the Author. Includes several sample plotfiles. Version 1.00, binary only, shareware. Author: Paul Gill

Timing A program to clock the time between two events. You can use several names, enabling the timing of different events. Useful mainly in scripts though other uses are possible. Timing can give the elapsed time in ticks, seconds or in the normal hh:mm: ss format. Version 1.21, freeware, binary only. Author: Chris Vandierendonck

UCD A utility for changing the current directory. It scans a disk and builds a file containing information about the directory structure that makes it possible for UCD to change directory to any directory in the scanned volume by simply naming the directory without pathname information. UCD can keep track of the directory structure of multiple volumes. Now supports wildcards. Version 1.15, an update to version 1.0 on disk 734. Binary only, shareware. Author: Uffe Holst Christiansen

YAPS "Yet Another Public Screen Manager". Using YAPS, you can open Public Screens in ALL(!) Amiga-DisplayModes, even in the new A4000/ A1200 Modes. Requires OS 2.04 (V37+), works even under OS 3.0 (V39+). Binary only. Author: Karlheinz Klingbeil (CEKASOFT)

Fred Fish Disk 786

Hyper Will lead you through documents that are written to be used with the legendary 'Am*gaGu*de' from Commodore. An ARexx port gives access to it from other applications. Requires OS 2.x. Version 1.15a, an update to version 1.00 on disk number 739. Shareware, binary only. Author: Bernd (Koessi) Koesling

IconAuthorDemo A replacement for IconEdit2.0. It can transform IFF images or brushes into resized 2-BitPlane brushes or icon files that match the WorkBench2.0 colors. Online help is available via 'Hyper'. Demo version limited to processing provided demo image only. Requires OS 2.x. Version 1.06, an update to version 1.00 on disk number 739. Shareware, binary only. Author: Bernd (Koessi) Koesling

Macro A small utility that records a sequence of keypresses that can be recalled at any time. Handy for 'on the fly' recording because of its simplicity. (Doesn't need a window, doesn't use the functions keys, so it won't interfere with other uses of them, etc.) Version 1.0, includes source. Author: Piero Filippin

RSM An ARexx compatible serial port manager. Run your serial port from other programs! Version 1.42, C source included. Author: Ron M. Battle

VirusZ A virus detector that recognizes over 500 bootblocks (196 boot viruses) and over 70 file viruses. The filechecker can also decrunch files for testing. The memory checker removes all known viruses from memory without 'Guru Meditation' and checks memory for viruses regularly. VirusZ has easy to use intuitionized menus including keycuts for both beginners and experienced users. The totally new bootblock lab offers all important bootblock operations on one screen. VirusZ performs a self-test on every startup to prevent link virus infection. Written entirely in assembly language and operates with Kick- start 1.2/1.3, OS 2.0 and OS 3.0. Version 2.27, binary only, shareware. Author: Georg Hörmann

Fred Fish Disk 787

ApplSizer An Applcon utility to size disks, directories or files. Gives the size in bytes, blocks and the total occupied. Requires KickStart 37.175 or higher. French and English documentation. Version 0.20, binary only. Author: Gérard Cornu.

GetSC Gets the colourmap of a single specified or all available screens. The colour values are given in hexadecimal format. GetSC is also the perfect tool to compile a collection of colourmaps for use by the SetSC program. Version 2.00, shareware, binary only. Author: Chris Vandierendonck

MakeInfo A modified GNU makeinfo that allows you to easily create a AmigaGuide(R) hypertext file from a TexInfo .tex file. in addition to the usual plain ASCII file and a TeX .dvi files. This version fixes two nasty bugs: makeinfo working on 68030 machines only, and amiga.tex not handling correctly all foreign characters. Version 1.49b, includes source. Author: FSF, amiga enhancements by Reinhard Spisser and Sebastiano Vigna

RIVer Many programs contain in their binary code an embedded version ID, which is used by the AmigaDOS command 'Version'. RIVer is not a replacement for this command, but rather an extension. RIVer enables you to add this embedded version ID as a comment, or to print it in a table where each field of the ID is clear- ly printed. Version 2.00, freeware, binary only. Author: Chris Vandierendonck

Scale Plays 1-4 simultaneous musical scales on the Amiga's 4 sound channels, using Rob Peck's AudioTools package. Six octave range, ascending/descending, multiple steps, several different speeds of playing simultaneous scales, overall tempo control- ler. Intuition interface. Includes source. Author: Dick Taylor

SetSC Allows you to change or remap the colours of a screen. SetSC gets the colourmap from a file by using the map's name, from the Workbench screen or directly from the command line. SetSC is very useful in scripts, where you can change the screen colours one or more times during script execution. Version 2.10, shareware, binary only. Author: Chris Vandierendonck

SpartanThe sources to the Spartan PD scsi interface driver for Amiga 500 and Amiga 1000 originally by Paul Harker. This is an enhanced version that includes a major bugfix and * SCSI-Direct support. Versions 34.3 (generic) and 34.4 (true SCSI). Author: Several, see documentation

ViewtekA feature packed Picture/Animation Viewer. Shows most ILBM's (including 24-bit ILBM's), most Compuserve GIF format images, most JFIF format JPEG images and most ANIM Op-5 format ani- mations, with support for different palettes for each frame. Supports SHAM, CTBL, and PCHG images, full support of ECS/AGA display modes (ie. show 256 color GIF's directly, show 800x600 HAM animations, etc.). Supports viewing contents of clipboard. Iconifies to a Workbench AppIcon. Includes a version written for GVP's Impact Vision 24, to support true 24-bit display. Version 1.02, requires Workbench 2.04+, binary only. Author: Thomas Krehbiel

Yacht The famous 5 dice game revised for the Amiga features contin- ually updated onscreen scorepad which displays all possible scores after each roll. Another feature is the player con-trolled dice roll - hit the STOP ROLL gadget when you feel lucky! Version 1.1, binary only. Author: Richard Gallagher

Fred Fish Disk 788

Cheats Have an old game that you got frustrated with and put away? Get hopelessly lost in an adventure game maze? Get to level 218 of your favorite game when your cocker spaniel mistook your scrap of paper listing entry level codes for his favorite sock? Well there might be something in this huge list of game solutions, hints and tips that you can use! Author: Many! see individual listings.

MatchPlay A small CLI program that enables experimenting with AmigaDOS pattern matching. It's the best way to learn how to use and interpret those patterns. You give a pattern and a string as arguments and the program determines if the pattern would have matched the string. Requires OS2.x, version 1.00, binary only. Author: Chris Vandierendonck

MouseAideDEMO A DEMO version of a 'Mouse' utility which has all the standard functions: Mouse Acceleration with threshold, window and screen manipulation by mouse and keyboard, mouse and screen blanking, SUN (auto-activation) mouse, user definable 'hot key' command, Keyboard 'String' macros, etc... But also has functions other 'Mouse' programs do NOT, such as: Shell-Cycling, Key Clicking, KeyClosing, Multi-Icon-Select with Mouse, Middle Mouse Button Windowing, EZ-Date generation, Mouse Port switching, Workbench to the front function, Freezing Mouse & Keyboard of all input, etc... Now more 2.0x friendly then older versions, including the ability to fuction correctly in 'Super-HiRes' screen mode! Written in 100% assembly language for efficiency in size and CPU usage. Version v7.12a, an update to version v5.02a on disk 711, Shareware, Binary only. Author: Thomas J. Czarnecki

NPD A little utility to convert NoisePacker 2.xx modules to Pro- Tracker format. Works on 1.3/ 2.0/3.0. Version 2.40, binary only. Author: Nils Corneliusen

NTSC&PAL Two small command line utilities to switch back and forth be- tween NTSC and PAL display modes. Should work on any machine with a 'Fatter Agnus' or better. Binary only. Author: Paul O'Flynn

QC A small CLI command that returns information about the current shell. Such as: the shell/cli process number, the prompt used, the current directory, the default stack size, the current FAILAT level, the DOS error that occurred with the last command run, the return code of the last command, and more. Version 1.10, freeware, binary only. Author: Chris Vandierendonck

Fred Fish Disk 789

MakeDMake An automated DMake file generator. You give it the names of all the C-files used to produce your executable (except #include'd .c or .h files), and it will automatically scan them to find all dependencies, and produce a ready to use (in many cases) DMakeFile calling DCC with options you will need for normal compilation and linking. Version 0.15, includes source. Author: Piotr Obminski, from original code by Tim McGrath

PongoDemo Demo version of PONGO 1.1, a 3D dynamic modeling program that loads, animates and transforms 3D objects in many different ways. This demo version only supports the IFF ANIM5 file format for animations, with the 'Save Imagine object' feature disabled. Supports the following types of morphing: Transcale, Taper, Shear, Rotate, Twist, Bend, Waves, Radial Bend and Metamorph. All transformations may be combined (i.e. you might both Twist and Shear an object at the same time). Requires 1 MB ram, and a PAL Amiga (does NOT run on NTSC computers). Author: Guido Quaroni, submitted by AMIGABYTE

QMouse An unusually small and feature-packed 'mouse utility". Was inspired by, but not derived from, the original QMouse by Lyman Epp. Features include automatic window activation (like WindX), top-line blanking for A3000/A2320 users, system- friendly mouse blanking, mouse acceleration/threshold, 'Pop- CLI", click-to-front/ back, 'SunMouse", 'NoClick", 'WildStar", Northgate key remapping, and more. Requires Kickstart 2.0, but is not a commodity. Only 3K. Version 2.21, an update to version 2.20 on disk 731. Public domain, assembly source included. Author: Dan Babcock

Fred Fish Disk 790

UChessA powerful version of the program GnuChess version 4 for the Amiga. Plays a very strong game of chess. Code has been re-written and data structures re-organized for optimal efficiency on 32 bit 68020 and better Amiga systems. Fully multitasking, automatically detects and supports 640X480X256 color AGA mode machines, and does not at any time BUSY wait. Requires a 68020 /030/040 based Amiga computer system with AmigaOS 2.04 or later and 4 Meg of ram minimum. Special 'L' version optimized for 68040 and requires 10 Meg of ram minimum. Supports a variety of standard features such as load, save, edit board, autoplay, swap sides, force move, undo, time limits, hints, show think- ing, and a supervisor mode that will allow two humans to play with the computer acting as a 'supervisor". Version 2.04, includes source. Author: FSF, Amiga Port by Roger Uzun

To Be Continued.....

In Conclusion

To the best of our knowledge, the materials in this library are freely distributable. This means they were either publicly posted and placed in the public domain by their authors, or they have restrictions published in their files to which we have adhered. If you become aware of any violation of the authors' wishes, please contact us by mail.

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Special Addition:

The following sets of disks were inadvertently missing from previouse AC listings. We supply them here to assist our readers in maintaining a complete list of Fred Fish Disks. For a consident indexed and documented list, please see ***AC's GUIDE To The Commodore Amiga.***

Fred Fish Disk 650

EraseDisk A small, fast program used to erase a disk by setting all bits on the disk to zero. Version 0.92, an update to version 0.69 on disk 544. Binary only. Author: Otto Bernhart

MountShare Allows you to reuse the loaded code from one device for other devices that are applicable. Using MountShare, you specify a master device whose handler will be reused by other devices. Author: Olaf 'Rhialto' Seibert

OwnDevUnit A package that provides an extended locking mechanism for a device/ unit pair that makes using programs like getty much easier. Getty is a program that sits on the serial port waiting for calls to come in. By using OwnDevUnit.library, a program can request that getty temporarily release the serial port. Version 2.1, an update to version 2.0 on disk 577. Includes source. Author: Christopher Wichura

P-Animate A full 3D Animation program for producing animations in Anim5 format, with emphasis on live characters rather than inanimate objects. Can also be used to produce animated illustrations for use in P-Reader illustrated texts. Version 2.1, freeware, binary only. Author: Chas A Wyndham

P-Compress A compression program that produces smaller files faster than any other current general-purpose cruncher, using LZH compression algorithms. Can handle single files, whole drawers, disks, or selected files or types of file within drawers and disks. Includes compression and decompression object files which can be linked to your own programs to allow them to access and output data in LZH format. Version 2.3, an update to version 2.1 on disk 595, with substantial enhancements. Freeware, binary only. Author: Chas A.Wyndham, LZH code by Barthel/Krekel

P-FixLib A new P-Suite utility that diverts calls to DOS library so that P-Compressed files are decompressed before being opened or executed. Any type of file, inluding icons, executables, libraries, fonts, texts, etc. may be compressed. Effectively doubles the capacity of your disks. Version 1.2, freeware, binary only. Author: Chas A.Wyndham

Fred Fish Disk 651

501 This program keeps score for the dart game 501. Games recorded via the keyboard create a data base reflecting each player's performance. The statistics track personal bests, averages, win percentages and high scores. Written and compiled using HiSoft Basic Professional. Version 1.12, binary only. Author: Gilles Lepage

Icons A bunch of 8-color icons for systems running AmigaDOS 2.0. Previously released 8-color icons from the author appeared on disks 213 and 533. Author: Wolf-Peter Dehnick

SID A very comprehensive directory utility for the Amiga that supports at least a couple of dozen different commands for operating on files. Version 2.0, an update to version 1.06 on disk 338. Binary only. Author: Timm Martin

Fred Fish Disk 652

ARTM Amiga Real Time Monitor displays and controls system activity such as tasks, windows, libraries, devices, resources, ports, residents, interrupts, vectors, memory, mounts, assigns, locks, fonts, hardware and res_cmds. This is version 1.6, an update to version 1.3c on disk 551. Shareware, binary only. Author: Dietmar Jansen and F. J. Mertens

bBaseII A simple database program using an intuition interface. Stores, sorts and searches for information. Limited to 9 fields in each record. Features include fast sorting, search in any field, mailing label support, and best of all, it's really easy to use. This is version 5.32, which fixes some bugs which crept into version 5.3 on disk 609. Binary only. Author: Robert Bromley

Brain A small multitasking game which is made for entertainment during compiling/ linking. Your task is to create a formation of numbers from 1 to 4 given randomly by the computer. If you click on an empty plot, a '1' will appear and all neighbours will raise their numbers by one. Version 1.01, includes source. Author: André Wichmann

Burf A BackUp ReFresher written in Rexx. Designed to maintain backups of important directories between full volume backups. Copies only new and modified files, using either archive flags or date comparison. Can optionally delete from the backup any files and subdirectories not found in the original. This is version 1.00. Author: Michael Tanzer

Elements Very nice interactive display of the the Periodic Table of Elements. Includes general row and column information, plus a test mode where the program asks specific questions about the selected element or row/column. This is version 3.0, an update to version 2.3b on disk 593. Now is completely AmigaDOS 2.0 conformant. Path and language information are configurable from the icon, uses 2.0 proportional fonts, can be opened on a public screen, and includes German and Swedish name files. Shareware, binary only. Author: Paul Thomas Miller

Notify A suite of Rexx programs that can be used to issue messages or run commands automatically on certain days and/or at certain times of day. Facilities are provided for the adding, editing and deleting of messages, and for displaying the times and texts of pending messages. A chime program is included to enable the time to be announced at regular intervals. This is version 1.02, an update to version 1.01 on disk 603. Author: Michael Tanzer

SwitchColors Allows you to switch between three palettes: WorkBench 1.x standard colors, WorkBench 2.0 standard colors and your own palette. Version 2.0, includes source in C. Author: Guido Wegener

Fred Fish Disk 653

AniMan AniMan combines Amiga animation, speech synthesis, and voice recognition, to provide you with an animated talking head that will run any Amiga program by voice command. Ask for an Amiga program by name, and AniMan will oblige. If AniMan becomes impatient, you may be insulted. AniMan will also recite poetry if you ask nicely. This is Version 2.1 of AniMan, which requires only 512K chip memory and supports both the Perfect Sound 3 or Sound Master (Sound Magic) audio digitizers. AniMan is like nothing you've ever seen before. Binary only. Author: Richard Horne

BumpRev Implements easy creation of source code revision headers, similar to the log headers to be found at the top of the Amiga 'C' include files. Is a rewritten version of the DoRevision program from disk 325. This version can be used for assembler source files as well as C source files. This is version 1.0, includes source. Author: Torsten Jürgeleit

FileSelect A new file requester which is small, fast and has some new features. It has a flexible filter option, optional DOSgadgets (delete, rename and makedir), displays the size of a program, is fast, can display all connected devices, etc. Version 2.0, includes source in assembly language. Author: André Wichmann

HardBlocks A shared library with support routines for Commodore's hardblock standard, and a small tool which demonstrates use of the library. Version 1.1, includes source. Author: Torsten Jürgeleit

MidiDiag Displays midi data as well as indicating which midi function was detected. Version 2.1, binary only. Author: Michael Dosa

WBase A handy database which stays as a small window on your Workbench screen and supports PowerPacked files, even crunching them itself. It also allows you to run programs from it. This is version 1.2, binary only. Author: Simon Dick

WControl A printer style controller which stays on the Workbench screen and allows you to change your printers styles, it works through whatever printer driver you have and so works with all printers. This is version 1.0, binary only. Author: Simon Dick

Fred Fish Disk 654

2View 2View is an ILBM picture viewer for use under Workbench 2.0. It supports all standard Amiga graphics modes, SHAM, MacroPaint-style dynamic hires, color cycling, ARexx, and both the CLI and Workbench. A list of files to display can be given, or each filename can be specified individually. Each picture can be shown for a specified period of time or until the user clicks the left mouse button. Version 1.50, an upgrade to version 1.11 on disk 546. Includes source. Author: Dave Schreiber

DSound DSound is an 8SVX sound sample player that plays samples directly off a hard drive, without having to load the entire sample into memory first, making it possible to play samples of any length even under limited memory condition. This version fixes bugs and adds support for stereo samples and playing a mono sample out of both left and right channels. In addition, DSound can now be made resident. Version 1.00, an update to version 0.91a on disk 546. Author: Dave Schreiber

Intuisup A shared library with support routines for using texts, menus, borders, gadgets, requesters, and more, under AmigaDOS 1.3. Includes a template editor and source to library and test programs. This is version 4.0, an update to version 3.0 on disk 601. Author: Torsten Jürgeleit

NewBoot A new bootblock which optionally kills all fastmem, avoids NTSC-Amigas (PAL version only), opens the CLI-screen with the maximum size of 256 pixels (PAL version only), installs a fast TurboFonts routine which speeds up all _LVOText activities and changes the color during booting to show that no virus is on disk. All options can be skipped by pressing a mouse button. Version 1.1, includes source in assembly. Author: André Wichmann

SANA Main text of the final (v1.0) SANA-II Network Device Driver Specification. To actually develop a SANA-II device or software which directly uses one, you will need additional information (available from CATS). Update to the obsolete version on disk 540. Author: Dale Larson, Greg Miller, Brian Jackson, Ken Dyke

WBLink WBLink adds an 'AppIcon' to the Workbench 2.0 screen that creates a link to whatever file or directory is dragged on top of it. This version fixes some bugs and lets the user specify where the icon will be placed. Version 1.10, an update to version 1.00 on disk 546. Includes source. Author: Dave Schreiber

Fred Fish Disk 655

Ashido A clone of the commercial game 'Ishido'. You must put 62 tiles with 6 different patterns and 6 different colors on a 12 x 7 board, but only tiles with either same color or same pattern may touch each other. Six different game modes. The best players scores are saved to disk. Version 1.0, includes source in assembly language. Author: André Wichmann

Haktar A kind of Adventure Construction Kit based on an easy-tolearn interpreter language. With it, you can create moderately complex multiple choice adventures. Some example adventures are included. Version 1.6, includes source. Author: Guido Wegener

Fred Fish Disk 656

CyberCron A cron utility for AmigaDOS 2.0. Uses the new, more flexible, AmigaDOS 2.0 technique for running programs. Offers an extended set of options that may be specified for any given event. Version 1.2, includes source. Author: Christopher Wichura

JbSpool A print spooler written specifically for AmigaDOS 2.0. Has been implemented as a commodity and written with the "User Interface Style Guide" close at hand. Features a complete font adaptable GUI containing a lot of control gadgets and menus. Version 1.0, includes source. Author: Jan van den Baard

Pipeline A game like the commercial game 'Pipe dream' (Pipe mania). Needs a joystick. High scores are saved to disk. This is version 2.0, an update to version 1.0 on disk 358. Includes source in assembly language. Author: André Wichmann

SurfacePlot SurfacePlot is a math tool for drawing 3-dimensional parameterized surfaces. Useful for visualizing the surfaces used in various mathematics classes. Allows you to use three separate functions for the X, Y, and Z coordinates. Includes rotation and zoom for changing the viewpoint. Version 2.0, binary only. Author: Ole Bak Jensen

Fred Fish Disk 657

BaldricDemo Demo version of a commercial platform style game. Works with PAL or NTSC. Binary only. Author: Lindsay Whipp

K4Editor Demo version of a sound editor for the Kawai K4 Sythesizer. Displays and allow editing of all parameters of midi data dumps. This is version 0.99, shareware, binary only. Author: Martin Stengle and Bernd Jessel

NoDelete This program pops up a requestor to alert you of a file deletion being attempted via DeleteFile() and allows you to accept or cancel it. This also pertains to any files you attempt to delete via "delete". Version 2.01, an update to version 1.5a on disk 477. Includes source. Author: Uwe Schuerkamp

Fred Fish Disk 658

Bump A little tool that makes it easy to keep the version string in your source code up-to-date. Version 1.0, includes source. Author: Jan van den Baard

Enforcer Detects/protects against illegal memory hits. Compatible with all OS versions & machines (requires a Memory Management Unit or 68030 processor). The low 1K of

memory and all areas that are not RAM are protected from CPU reads or writes. ROM is marked as read-only. Version 2.8b, an update to version 2.6f on disk 474. Binary only. Author: Bryce Nesbitt

NoFragLib A library containing 6 routines for defragmenting memory. This is version 2.2, an update to the version on disk 503. Includes source. Author: Jan van den Baard

RDM A fast, small, efficent and easy to use DirUtility with UNIX-compress compatible packer and endless number of configurable buttons, as well as all the usual features. This is Version 0.99, the DEMO version of 1.0, which can be ordered from author. Shareware, binary only. Author: Reginald Lowack

Skew Skeleton Writer is a tool for generating C code for various Intuition based applications. You click the mouse and the code gets written. Similar to PowerSource and GadToolsBox, but with slightly different functionality. Author: Piotr Obminski

View A text displayer with many controls and features including searches, file requestors, jump to editor etc. Version 2.0, an update to version 1.5 on disk 570. Includes source. Author: Jan Van Den Baard

Fred Fish Disk 659

Adventure The Colossal Cave Adventure, by Donald Woods and Will Crowther. This program runs from the CLI or Workbench, and is virtually identical to the original mainframe classic. Version 1.00, binary only. Author: Donald Woods, Will Crowther; ported by Tony Belding

Celest AKA Celestial Caesars, a strategy game for up to nine players. This simple wargame pits you against any combination of human or computer opponents. The game uses an Intuition interface, and can be played by file-mail. Version 1.11, binary only. Author: Tony Belding

GadToolsBox A program that lets you draw/edit GadTools gadgets and menus and then generates the corresponding C or assembly code for you. This is version 1.3, an update to version 1.0 on disk 570. Includes source. Author: Jan van den Baard

MungWall Munges memory and watches for illegal FreeMem's. Especially useful in combination with Enforcer. Output can go to either the serial or parallel port. Includes a new MungList program that examines used memory areas for MungWall tag info, and outputs a list of who owns the various pieces of allocated memory, their sizes, etc. Can even identify the owner of the memory by task name. Version 37.51, binary only. Author: Commodore Amiga; submitted by Carolyn Scheppner

Fred Fish Disk 660

Diamonds Drive your little thief buggy around the screen and try to pick up the diamonds while avoiding all the nasties on the screen. Freeware. Binary only. Author: Harshy Wanigasekara

Eaters A screen hack that places a number of creatures called Eaters on the screen. These hungry Eaters live on white dots, consuming them and leaving black droppings in their place. When not near a white dot, they move randomly. Version 1.0, includes source. Author: Guido Wegener

Kan A program that patches a replacement delete function into the DOS library. This program will simulate the Trashcan function provided by Workbench. Support programs provided to allow automatic purging of Kan directory from startup sequence. Compatible with 1.3, 2.0 and Amiga 3000. Version 1.0, binary only. Author: James Butts

LoveMice A short form of the Mice In Love algorithm published in Scientific American (Spektrum der Wissenschaft). Version 1.0, includes source. Author: Guido Wegener

VMB Demo version of Video Music Box, a program designed to provide an easy to learn and use environment for Amiga multimedia background music composition, while requiring no prior music compositional knowledge. Basic sequences are generated in many common musical styles from pre-arranged music pattern templates and chord progressions. Special tools provide the ability to add new notes or parts that follow the chord progression. Compositions can be previewed over MIDI or the internal audio, and saved as MIDI or IFF SMUS files. Author: David Strohbeen

Fred Fish Disk 721

DataFiler A database for names, addresses, phone numbers, etc. Has search and print capabilities. Version 1.01, binary only. Author: Ken Winfield

DirWork A fast, small, efficient, DirUtility. Configurable options and buttons, as well as all the usual features. Comes with external configuration editor. This is version 1.62, an update to version 1.51 on disk 670. Shareware, binary only. Author: Chris Hames

Division An educational program for kids of all ages that helps to develop and sharpen division skills. Has four levels, a practice section, and a testing section. Version 1.1, binary only. Author: Ken Winfield

DPU Disk Peek and Update, a hex disk and file editor. Functions include show device info, show bitMap, check disk, zap file, zap disk, zap fileSystem and zap rigid disk blocks. This is version 1.2, binary only. Author: Frans Zuydwijk

Octothello An othello type game, but played on an octagaral board. There are hundreds of variations to the game, with resizable boards, different corner shapes, and a play to lose mode. Shareware, binary only. Author: PC Solutions

VCR A database for all your VCR tapes. Has built in search and print capabilities. Version 1.1, binary only. Author: Ken Winfield

Fred Fish Disk 722

Counting An educational program for kids from 4 to 14, that helps to develop and sharpen skills in addition, subtraction, and multiplication. Version 1.0, binary only. Author: Ken Winfield

Intuisup A shared library with support routines for using texts, menus, borders, gadgets, requesters, and more, under AmigaDOS 1.3. Includes a template editor and source to library and test programs. This is version 4.5, an update to version 4.4 on disk 715. Author: Torsten Jürgeleit

Fred Fish Disk 723

AniMan AniMan combines Amiga animation, speech synthesis, and voice recognition, to provide you with an animated talking head that will run any Amiga program by voice command. Ask for an Amiga program by name, and AniMan will oblige. If AniMan becomes impatient, you may be insulted. AniMan will also recite poetry if you ask nicely. This is Version 3.2 of Ani- Man, an update to version 3.0 disk 712. Either the Perfect Sound 3 or Sound Master (Sound Magic) audio digitizer is re- quired, along with 1MB of fast memory. Binary only. Author: Richard Horne

DiskMate A multitasking floppy disk utility program. Features include multidrive disk copier, disk formatter, disk eraser, disk checker and installer. Version 2.1, binary only. Author: Malcolm Harvey

EternalRome A historical strategy game, that in spite of its high complex- ity is fast and easy to play. Fully mouse controlled with a fine zoomable map of the Roman empire (overscan and interlaced options). The simulation delivers many historical insights because of its accuracy (may be used for educational purposes) and is a challenging and entertaining game for two or more players (also interesting for solitary studies). Version 1.1, an enhanced update to version 1.0 on disk 502. Tryware, binary only. Author: Sven Hartrumpf

MemGauge A graphical memory gauge. Displays your computer's memory (chip, fast, public) in three horizontal bars. Version 1.2, binary only. Author: Malcolm Harvey

PrinterCTRL A printer interface program which allows you to send raw HEX and device driver commands to your parallel printer. Also has provisions for printing text files to the printer.device. Makes extensive use of the req.library functions. This is version 1.00, freeware, includes source. Author: Paul Miskovsky

Fred Fish Disk 724

BackUP A hard drive backup program that features a custom Intuition interface, multi-floppy drive support, incremental/full back-ups, on-the-fly compression using lh.library, optional verify and a restorable configuration. BackUP requires Workbench 2.0, arp.library V39 and lh.library V1. Version 3.5, binary only. Author: Felix R. Jeske

DonsGenies A collection of more than forty ARexx "genies" for use with Professional Page, plus some supporting material. Also in- cludes two example ARexx scripts for Art Department Profes- sional. Version 1.0, shareware, includes source. Author: Don Cox

XSearch A program to search files and directories on any Amiga device. Uses AmigaDOS 2.0 style interface. Includes both German and English versions. Includes source in KICKPascal. Author: Stefan Plöchinger

Fred Fish Disk 725

MagIcon A program which takes 'fake' icons dropped on the Appicon and turns them into 'real' icons. The program also supports a Tools-menu entry so 'fake' icons spread over several windows can be easily iconified. Support for 38 file formats and the appropriate icons are included. Requires Kickstart 2.0 or higher. This is version 1.0, binary only. Author: Oystein Larsen, Ultima Thule Software

Mine A new Modula-2 implementation of an old computer game. You have an N * N square with mines hidden in some fields. Your job is to mark them with a flag as fast as possible. High- score lists are supported. Important parts of the source code are included. Requires AmigaDOS 2.0. Author: Thomas Ansorge

SnoopDos A utility for monitoring AmigaDOS calls. In particular, it allows you to see what libraries, devices, fonts, environment variables or startup files a program is looking for. Very useful when you're trying to install a new application. Version 1.5, an update to version 1.2 on disk 451. Includes source in C. Author: Eddy Carroll

Term A gift-ware telecommunications program written for AmigaOS 2.0 or higher. Features include total configurability, full ARexx control, Xpr-transfer support, filetype-identification after download, cut & paste/ point-and-click on screen, auto upload and download, unlimited size scrollable review buffer, solid and fully-featured VT100/ VT220/ANSI emulation, optional fast atomic terminal emulation, hotkey support, powerful phonebook and dialing functions, ability to save and print the contents of the screen as IFF-ILBM or ASCII file, full overscan and screen resolution support (new ECS screen modes included), asynchronous operation and a lot more. This is version 2.3, an update to version 2.2a on disk 681. Includes full source. Because of its size, it is distributed on two disks. This is part 1 of 2. Part 2 is on disk 730. Author: Olaf 'Olsen' Barthel

Fred Fish Disk 726

HamLabDemo Demo version of an expandable image format conversion utility that converts GIF, IFF, JPEG, Targa, BMP, TIFF, PBMPLUS, MTV, Spectrum 512, QRT, and Sun images into IFF (normal, HAM, half-brite, and "sliced" variations of each). Images can be scaled, dithered, color corrected, and cropped. This demo version is limited to processing images of 512 by 512 pixels or less. This is version 2.0.8, an update to version 2.0.6 on disk 712. Shareware, binary only. Author: Ed Hanway

Hextract A complete header file reference. Definitions, structures, structure members and offsets, flag values, library contents, function definitions, registers, library offsets, etc. The data from a set of V1.3 Amiga and Lattice header files is included and packed for immediate reference by Hextract. Version 1.2, an update to version 1.1 on disk 674. Has greatly reduced search times. Freeware, includes partial source. Author: Chas A. Wyndham

P-Index A program for creating active index/selector pages to replace the normal window/icon display. Appearance of pages is only limited by the capabilities of your paint program and your imagination. Index lines can be shown as arrays of boxes (as with current "selector" programs), or as icon look-alikes, or anything else you fancy, with normally a large saving in disk space. Freeware, binary only. Author: Chas A. Wyndham

P-Reader An all-purpose reader that displays texts,pictures,animations and sounds, which may be uncompressed or compressed with 'P-Compress'. Texts can include embedded static or animated illustrations and sounds. This is version 6.2, an update to version 5.2 on disk 595, and includes scrolling and a variety of screen colours, with other enhancements and bug fixes. Freeware, binary only. Author: Chas A. Wyndham

PowerSnap A utility that allows you to use the mouse to mark characters anywhere on the screen, and then paste them somewhere else, such as in another CLI or in a string gadget. Checks what font is used in the window you snap from and will look for the position of the characters automatically. Recognizes all non proportional fonts of up to 24 pixels wide and of any height. Works with AmigaDOS 2.0 in both shell and WorkBench environments. This is version 2.0, an update to version 1.1 on disk 542. Binary only. Author: Nico Francois

Fred Fish Disk 727

2View 2View is an ILBM picture viewer for use under Workbench 2.04 or later. It supports all standard ECS graphics modes, SHAM, Macropaint-style dynamic hires, color cycling, ARexx and both the CLI and Workbench. Version 1.52, an update to version 1.50 on disk 654. This version fixes a bug in 1.50 and adds support for 2.04-style wildcards from the CLI. Includes source. Author: Dave Schreiber

Adventure The Colossal Cave Adventure, by Donald Woods and Will Crowther. This program runs from the CLI or Workbench, and is virtually identical to the original mainframe classic. This is version 1.10, an update to version 1.00 on disk 659. Binary only. Author: Donald Woods, Will Crowther; ported by Tony Belding

Format A 2.04-only replacement for the AmigaDOS Format command. It uses a much more complete Workbench user interface (allowing for greater control over formatting from the Workbench) and is smaller that the original Format command. Version 1.00, includes source. Author: Dave Schreiber

Vertex A 3D object editor that differs from other 3D editors in many ways. You can choose any view, including perspective, to sel- ect points and examine objects. The view can be rotated, pos- itioned and scaled at will by either typed in values or using the mouse, which makes the editor fast and responsive. This is version 1.62a, an update to version 1.36.3 on disk 648. Shareware, binary only. Author: Alexander D. Deburie

Fred Fish Disk 728

501 This program keeps score for the dart game 501. Games recorded via the keyboard create a data base reflecting each player's performance. The statistics track personal bests, averages, win percentages and high scores. Written and compiled using HiSoft Basic Professional. Version 1.15, an update to version 1.12 on disk 651. Binary only. Author: Gilles Lepage

LastRefuge A fast action game, written entirely in assembler. Takes over the entire machine and loads off a special bootable disk. Uses lhwarp (included) to regenerate the bootable game disk. Binary only. Author: Carsten Tag

PatchMan An editor for the Roland JD-800 programmable synthesizer. You can receive/ transmit/save/load single patches, the special setup, all internal patches, "ALL"-datas, set parameters for the three effect systems used in Multi mode and edit the var- ious part parameters. Version 1.0, binary only. Author: Michael Fuchs

Fred Fish Disk 729

BBBBS Baud Bandit Bulletin Board System. Features include up to 99 file libraries with extended filenotes, up to 99 fully threaded message conferences, number of users, files, mes- sages, etc. are only limited by storage space, controlled file library and message conference access for users and sys- ops, interface to extra devices like CD-ROM and others, all treated as read only, complete Email including binary mail, and multiple forwarding, user statistics including messages written, files uploaded or downloaded, time, etc, plus much more. Version 5.4, binary only. Author: Richard Lee Stockton

DSound DSound is an 8SVX sound sample player that plays samples directly off a hard drive, without having to load the entire sample into memory first, making it possible to play samples of any length even under limited memory conditions. This is version 1.20, an update to version 1.00 on disk 654. This version adds sample looping, the ability to abort using CTRL- C, and the ability to prevent DSound from opening a window. Includes source. Author: Dave Schreiber

FF FF is a file find utility for use under Workbench 2.04 or later. It features a full, font-sensitive GUI, AppWindow support, dynamic find-list update, the capability to recog- nize both hard and soft links, and the ability to optionally descend into hard links to directories. This is version 1.01, includes source. Author: Dave Schreiber

Fred Fish Disk 730

Term A gift-ware telecommunications program written for AmigaOS 2.0 or higher. Features include total configurability, full ARexx control, Xpr-transfer support, filetype-identification after download, cut & paste/ point-and-click on screen, auto upload and download, unlimited size scrollable review buffer, solid and fully-featured VT100/ VT220/ANSI emulation, optional fast atomic terminal emulation, hotkey support, powerful phonebook and dialing functions, ability to save and print the contents of the screen as IFF-ILBM or ASCII file, full overscan and screen resolution support (new ECS screen modes included), asynchronous operation and a lot more. This is version 2.3, an update to version 2.2a on disk 681. Includes full source. Because of its size, it is distributed on two disks. This is part 2 of 2. Part 1 is on disk 725. Author: Olaf 'Olsen' Barthel

•AC•

And furthermore...

American Laser Games brings the Old Wild West and Space Frontiers to game players world-wide.





Whether you're solving a mystery (above) or saving a town (left), ALG has an interactive adventure for you.

You have just come to town. You are walking along a dusty street in what could only be the Wild West when an old prospector runs into the street to tell you that a band of desperados has locked the sheriff in his own jail and taken over the town. As the old man is speaking, a disreputable looking character moves into view down the street, draws his gun, and shoots the old prospector in the back. Or you see the scrubby-looking killer and gun him down before he has a chance to kill the old prospector, who could become a friend and a valuable source of information in town. It is these quick decisions and fast responses that decide your future in this lawless crossroad.

The realistic characters and interactive story is what has made *Mad Dog McCree* a fixture in arcades from San Francisco's Pier 39 to the shopping malls of New England. This highly realistic, laser disk game has spawned a whole series of worlds, all powered by the Amiga and created by the people at American Laser Games.

In the past two years, American Laser Games has created several different worlds of interactive fiction. From the Wild West setting of Mad Dog McCree, they entered the cool, dark world of *Who Shot Johnny Rock?* You are a detective and it is up to you to solve the mystery of who shot Johnny Rock. Any or all of four people could be the killer. Only through your successful efforts can you discover who the killer is. Your starting clue is a note clutched in the hand of the body of Johnny Rock. However, as in all the games from ALG, the scenario changes with each new play.

After Johnny Rock, ALG blasted off with a trip to space to encounter *Space Pirates*. The story line is that a band of space pirates have overrun a small colonized planet and captured its citizens. You must rescue the colonists and the ship's captain. Then you search four different planets to get the gems required to arm the Star Splitter which is the only thing powerful enough to destroy the space pirates.

Now ALG has created another fast action, quick thinking game, *Mad Dog II*. With Spanish gold, three different guides, and a whole lot of bad guys shooting at you from buildings and even trains, Mad Dog II is a sequel to live up to the original.

According to ALG's Director of Operations, Gary Essenpreis, attention to detail is a must in these adventures. For the video games, ALG has an in-house firearms design engineering department to develop and create all the fire arms used. This department even created the dreaded Gatling gun from scratch used in Mad Dog II.

On an average, a complete session could take between 15 minutes and a half hour to play. The time is dependent on the time required to solve the mystery. The time goes by a lot faster if you keep from getting yourself killed.

An interactive Background

American Laser Games is a division of ICAT (Institute for Combat Arms and Tactics), Inc. ICAT, Inc. is a supplier of combat training equipment for the military and law enforcement agencies. Located in Albuquerque, New Mexico, they provide a wide variety of training simulation scenarios in shoot-no-shoot situations throughout North America. While the professional programs were built to life-size screen projections, ALG converted their understanding of interactive technology and the Amiga to create the much smaller arcade games.

New Mexico companies provide film production and editing services. Even ICAT personnel and their children have worked as actors. The film is then transformed to a 12-inch laser disk. From the original storyboard to the shipping of the disks, each game takes between five to six months for completion.

Arcade owners are not limited in their use of the arcade display units. Although every game is different, an arcade may be changed from one game to the next with the change of only a few decals, a new laser disk, and a RAM pack. Within an hour the arcade owner can switch from fighting desperate outlaws in the Old West to searching through adventures in a star system alive with space pirates.

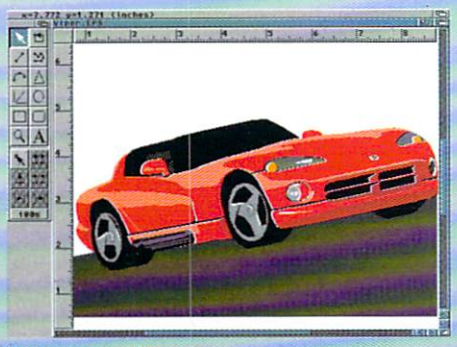
The games have been created to be easy to use and immediately recognizable. Screen sizes range from 25 to 50 inches. The gun is always holstered to the right: however, it can be used in either hand with the long cord running back to the main control box. The price of an arcade unit is dependent upon the size of the screen you want. According to company officials, the same games will be available on CDTV as soon as the technology is developed to provide an hour playing time for each game and full-motion video.

For foreign markets, each game is available in six different languages. English, French, German, Italian, Japanese, and Portuguese are currently available. The Japanese market has a dual language: English/Japanese. While the Wild West is very popular overseas in Japan and Thailand, the European market enjoys the Wild West but appears to prefer solving mysteries and trying to save or rescue characters.

Ideas are flying at ALG as they plan the next great adventure. One suggestion is to use popular movies, both old and new, as backgrounds for future adventures. The largest portion of the production cost in the entire game design is the filming. With movies re-edited for the arcade game, the costs would significantly drop and movie tie-in licensing could be very substantial.

American Laser Games
ICAT, Inc.
4801 Lincoln Road NE
Albuquerque, NM 87109
(505) 880-1718
Inquiry #244

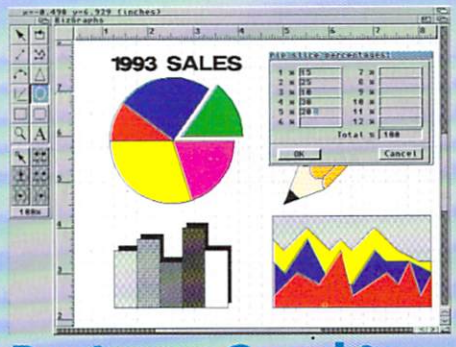
5 New Programs?



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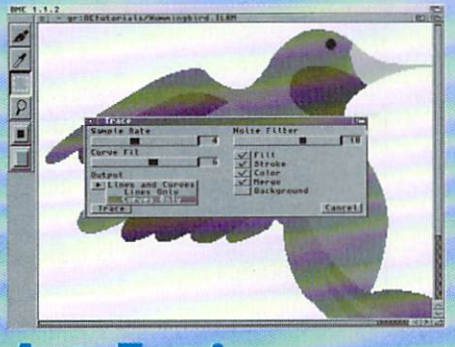
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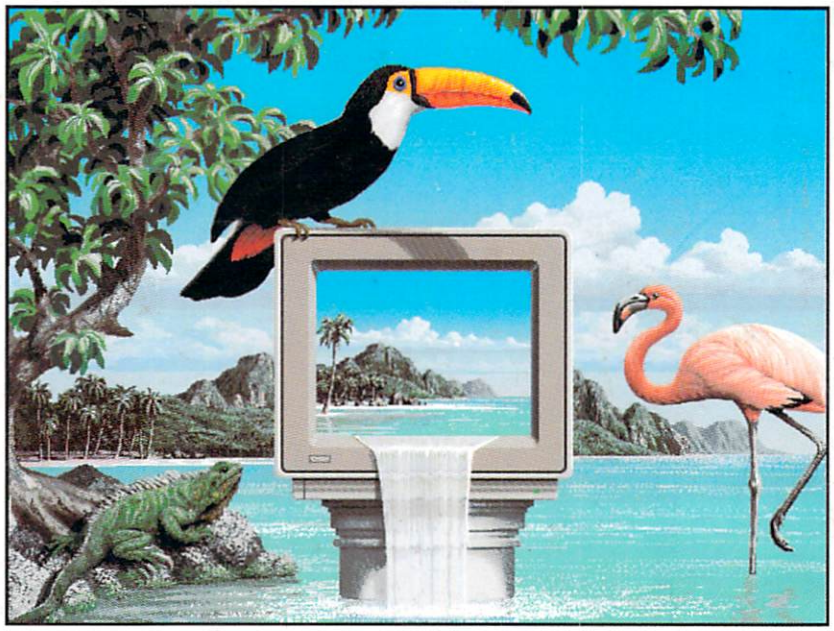
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